


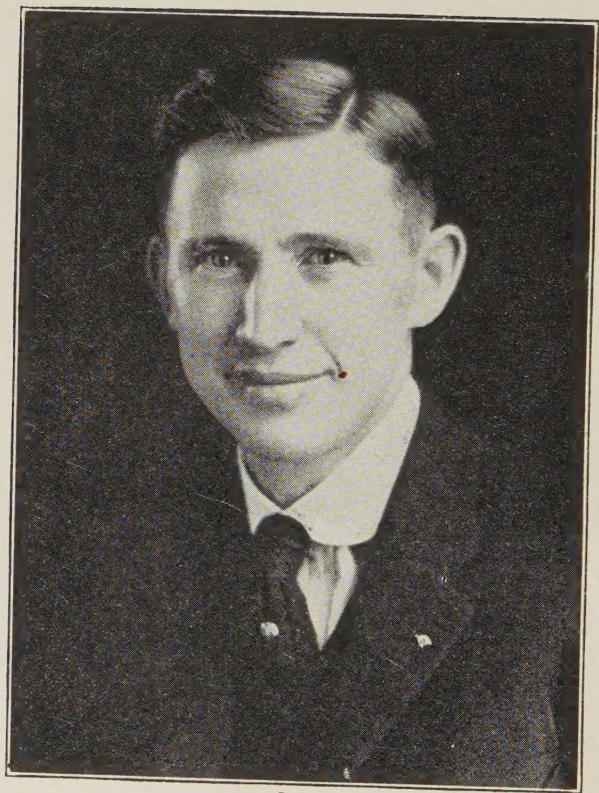
My Basket-ball Bible

FORREST C. ALLEN





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Ernest C. Allen

My Basket-ball Bible

BY

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Director of the Division of Physical
Education and Athletics,
University of Kansas.



SECOND EDITION

1924

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Acknowledgments

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is made to

TUSTAN ACKERMAN, *Captain-Elect 1925 Kansas; Forward on Ever-Victorious Missouri Valley Championship Team of 1923; Forward on Missouri Valley Championship Team of 1924; All-Missouri Valley Forward of 1923-1924; All-Western Center of 1924*

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TO MY MEN
WHEREVER THEY ARE
AND
TO THE MEMORY OF
THE GAMES THEY HAVE PLAYED.

The Silent Ones

"TOMMY" JOHNSON LOUIS DUPUIS
GEORGE McCUNE GEORGE HALE
DAN SETSER TOM SANDERS

ROBERT CLORE—(Chateau Thierry)
RAY KARL—(St. Mihiel)
ROBERT HEIZER—(2nd Battle of the
Marne)
EARLE TAYLOR—(Argonne Woods)
DAVID ADAMS—(Belleau Woods)

*"Only Those Who Are
Fit to Live
Are Not Afraid to Die"*

Notice

For the purpose of clearness and expediency in following the exposition in Chapter III on Individual Defense, we have reprinted three series of exhibits—E series, J series, and N series. In Chapter II these same series occur and are discussed from the standpoint of individual offense; in Chapter III the discussion is from the standpoint of the defense.

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INTRODUCTION

EACH succeeding season adds an ever-increasing contribution to the number of enthusiastic followers of sports, who, either through participation or attendance, find recreation and entertainment in the rapidly growing game of basket-ball. The fact that this development has become so widespread is sufficient reason for one's seeking, at least, a general understanding of its fundamental features.

Whether the reader be an athlete, a coach, or a spectator makes little difference. If he appreciates physical contests and enjoys the human side of athletics, Dr. Allen's "My Basket-ball Bible" will be interesting and instructive.

To many of the readers of this book, the author will need but brief introduction. In the first place, he has been a great player of the game, having been named All-American Guard while a member of the Kansas City Athletic Club Teams of 1904 and 1905. As a player on the Kansas Varsity, he showed his versatility by playing forward, center, or guard and was elected captain of the team of 1907. For seventeen years he has coached teams and has worked as an official in basket-ball games. For the last

four years he has officiated regularly in the National A. A. U. Tournaments held in Convention Hall in Kansas City, Missouri. Such experiences have enabled Dr. Allen to come into contact with every phase of the subject of basketball.

The author coached his first teams at Baker University, Baldwin, Kansas. This school, though comparatively small, met such teams as the University of Nebraska, the University of Missouri, Kansas State Agricultural College, and the strongest college teams in Kansas, and established a record of winning every game played during the two years that Dr. Allen was there with the exception of one, which was lost to the University of Nebraska.

From Baker University, Dr. Allen went to the Haskell Indian School at Lawrence, Kansas, where he was Director of Athletics and Coach of Basket-ball for one year. Besides winning the National Aboriginal Championship in this year, he was successful in carrying the Indian team through a continuous five thousand mile playing trip, meeting such teams as Detroit Athletic Club, Kansas City Athletic Club, Missouri Athletic Club of St. Louis, Michigan Agricultural College, Wabash College, and other noted teams

in Illinois, Ohio, Indiana, Kansas, Missouri, Minnesota, and Kentucky. Fighting through a schedule of twenty-four games in twenty-five playing nights, his Indian five were victorious in nineteen of the twenty-four games played.

During the seasons of 1908 and 1909, he held the position of Head Coach of Basket-ball at the University of Kansas. While coaching at this school in these two years, his teams captured the Missouri Valley Championship honors both times.

For seven years Dr. Allen was Director of Athletics and Coach of all sports at Missouri State Teachers College, Warrensburg, Missouri. In the first year there, he coached undefeated teams in the three major sports—football, basket-ball, and baseball—his football team having turned back every conference opponent scoreless. The basket-ball teams won consecutive championships throughout the entire seven years and in addition defeated many reputable teams outside the conference.

In 1919, Dr. Allen returned to the University of Kansas, as Director of Athletics. In this year, basket-ball prospects at Kansas hit the bottom. After the first scheduled game of the season was played, Dr. Allen was asked to take the team

and to see it through the season. Fully aware of the seriousness of his task, he took the team and finished third in the Missouri Valley Conference race of 1920. Since that time he has continued with the basket-ball teams at Kansas and has built up a system that ranks well with any basket-ball system in the United States. In 1921 Kansas again finished third in the Valley race; in 1922, tied championship with Missouri; in 1923, ever-victorious championship; in 1924, conference champions with only one defeat. During the three years of 1922-23-24, Dr. Allen's Kansas teams have won forty-nine out of fifty-one conference games played and have run up a record of thirty-four straight victories before being halted.

Dr. Allen has gained national recognition as a trainer of athletes and as a specialist in the treatment of athletic injuries. Big league baseball players and noted athletes in all branches of sports have directed their steps to Dr. Allen's door. So generally has his skill become known that journalists have called him "The Miracle Man" and "The Second Bonesetter Reese."

Recently Dr. Allen was appointed head of the consolidated Physical Education Program at the University of Kansas. He is introducing in the

University a plan whereby each student will participate in his own chosen sport. Now the play slogan at Kansas is "A Game for Every Student."

Although such schools as the Oregon Agricultural College, the University of Illinois, and the United States Military Academy at West Point have sought him, Dr. Allen has preferred to remain in Missouri Valley circles and to build up a physical education program at Kansas that will fulfil his dream of physical development for every student through a favorite sport.

The fundamental secret of Dr. Allen's basketball success seems to lie in an unusual ability to work with his men as though he were one of them. Dr. Allen's teachings are based on the belief that no team (matter it not how individually skillful the players or how thoroughly organized the playing unit) can succeed consistently without group morale and a will to drive to the end. His men know him as a player on psychic chords; and his technique as a technique with a soul. His powerful personality has won for him the distinction, among many, as being the greatest inspirational coach in the country.

Backed by seventeen years of coaching experience with fifteen championships, Dr. Allen

speaks with authority in the chapters on "Individual Offense," "Individual Defense," "Team Offense," and "Team Defense"; having had a wide experience in handling injured athletes, he knows the treatment of "Athletic Injuries"; relying largely upon mental stimulation in the training of his own teams, he has earned the right to add an innovation in "Inspirational Coaching." With such a background "My Basket-ball Bible" occupies an important place in the literature of sports.

PAUL ENDACOTT,

*Captain of the University of Kansas
Basket-ball Team of 1923.*

PREFACE

Firm in the belief that the building of men is equally as important as the building of machines, I am leaving this book with basket-ball coaches and with players who expect to become coaches, for their perusal and for their meditation.

If a man is honest in his convictions, out of his years of experiences, there must be gleanings that will aid some one else.

This is the spirit that has prompted me to give to the basket-ball world, which has given to me throughout these years a means of livelihood, my contribution.

Forrest C. Allen

*University of Kansas
Lawrence*

CHAPTER I

Preparations For The Season

THE GYMNASIUM

To Dr. James Naismith, originator of the game of basket-ball, formerly of Springfield, Massachusetts, Y. M. C. A. Training School, now of the University of Kansas, goes the credit for the erection of large gymnasiums. Before basket-ball was introduced (in the winter of 1892), there were few large gymnasiums and practically none with ceilings high enough for basket-ball to be played.

On account of the proximity of the players of this game to the spectators, it takes on a special form of attraction. The weather never causes a postponement, and the spectators have the comforts of the indoors. These phases of the game along with others have brought it to a state of popularity that has surpassed the originator's fondest dreams.

Large Gymnasiums—With an ever-increasing interest in this indoor winter sport, which so delightfully bridges the gap between football in the autumn and baseball in the spring, colleges all over the country began to combine their auditoriums and their gymnasiums until now many of our college and university gymnasiums

seat at a single game from 5,000 to 8,000 spectators.

But the crowds continue to increase, and the solution of the seating problem is *still* unsolved. Last year the University of Kansas basket-ball team played to 40,000 spectators during the season. Many other schools, both high schools and colleges, have similar attendance marks in a single season. So the need for greater seating space becomes more and more pressing as the game continues to grow in popularity.

Athletic Field Houses—One of the newest and perhaps the most feasible solutions of this basket-ball seating problem is the innovation of athletic field houses. These mammoth enclosures will eventually solve the seating problem for basket-ball games for many schools and will also provide more protected playing space for other winter activities. In these gigantic gymnasiums, approximately 15,000 spectators can be seated comfortably at one time.

Portable floors are installed in these plants so that they can be removed and a dirt base can be used for other sports. Winter football, baseball, and indoor track practices can be carried on in these plants without any of the usual handicaps of winter indoor sports.

Schools located in the larger cities have long ago been forced to abandon their own gym-

nasiums and to play in the town coliseums or in convention halls in order to accommodate their crowds. Land grant schools have been more fortunate in available seating space than have many others, as they have converted their large armories into basket-ball courts for their big games.

Portable Bleachers—Due to the fact that space in the average gymnasium must be economized, knock-down or portable bleachers have come into wide use. These can be purchased from manufacturers, or they can be made at home at nominal expense to fit the space desired. They can also be used if needed for the outdoor sports.

These portable seats should have foot rests; and no less than 17 to 18 inches of space should be sold for each seat. These seats can easily be placed on the balcony running-track also, providing the balcony is so constructed that it will carry the extra load. An engineer should inspect the running-track and pass upon its peak load before bleacher seats are installed there.

Entertainment of Patrons Between Halves—Owing to the packed condition of the average basket-ball audience, where on account of the close seating there are no adequate aisles for exit, it is well to entertain the patrons of the

game between halves. This does away with practically all of the former confusion and annoyance of people stirring about, crossing the court, going out of doors, leaving doors open and chilling seated spectators, getting in again after the game has started, and trying to cross the court while the team is on the floor.

Closing Doors Five Minutes Before Game—It is a good plan to close the doors five minutes before the game starts. Patrons may not like this plan at first, but when they get the habit of going early and learn to enjoy the relief that comes from lack of disturbance by late arrivals, they will welcome the change and would regret a return to the old plan.

Women's Physical Education Department Stunts—Many interesting between-halves innovations can be worked out for the entertainment of the fans. Clever exhibitions by the women's physical education department are always well received. I say "clever exhibitions" because the average basket-ball audience is quite discerning, and mediocre stunts will not get across. But it is surprising how flashy artistic stunts will "pep" the crowd and increase their enjoyment of the rest of the game. Good athletic dancing is always well received.

Boxing and Wrestling Entertainment—Three-minute boxing or wrestling bouts by the school's best artists in these lines are also welcome spices in this interim.

Holding New Cheer Leader Tryouts—"Pep" organizations can give variety to these occasions. This is a splendid time for the next year cheer leaders to try out. It gives the student body a good chance to get acquainted, not only with the prospective cheer leaders, but with each other.

Decorating the Gymnasium—A coach should never be too absorbed in the game and its outcome to forget the niceties in which audiences delight. The gymnasium should be evolved from the bare-wall cheerless place of previous days into a studied room of life, warmth, and color. The balcony rail bearing the pennants of every opponent of the home team—of every team in the conference—as well as American flags in proper places, lends an atmosphere of life and color that is well worth the pains that it takes to prepare it. If the atmosphere of the playing court is a thing of studied personality, with every evidence of thought for the guests of the evening, returns, not only in gate receipts, but in interest and loyalty, will be the result.



After the final gun. Kansas 16—Missouri 14.

Recognizing National Days—If a game should fall on a fete day or a national holiday, some recognition should be made of the occasion. Sometimes a two-minute talk by an outstanding speaker of the faculty or of the town will heighten the effect of such an occasion. Appropriate music is always a fine expression of feeling for such a day. Patriotic reverence for our national holidays is in perfect keeping with true basket-ball spirit. Lincoln's and Washington's birthdays both come during basket-ball season—one on the 12th and the other on the 22nd of February. Often basket-ball games are scheduled to occur on or near these dates. Recognition of such dates is entirely proper.

One Celebration that Worked—In recounting such events, I recall a game that fell on the 22nd of February (Washington's birthday) for which we used the following effective program. It is presented merely as a suggestion.

This particular game with one of our conference rivals was scheduled for February 22, 1923. Many of our students had gone home for the holidays, but that did not mean that we should make our game less attractive for those remaining. We first made recognition of the occasion by decorating the balcony rail with

large American flags and festoons of red, white, and blue bunting.

In that year, it happened that our team had two sets of home uniforms—one set of red and one set of blue. Their road uniforms were white.

For this game we equipped three complete teams of five each—one team of five being in red, one in white, and one in blue. About five minutes before the teams were to have gone on the floor for the preliminary workout, they lined up ready to march to the middle of the court. A lad of eight, dressed in a white regulation "gob" suit and carrying a large silk American flag preceded the line of march. Then came the teams in single column in the order of the colors of their uniforms—the red, the white, and the blue.

As the college band struck up the first strains of "The Star Spangled Banner," the teams came to a halt in the middle of the court and stood at attention until the anthem was finished. Of course, the crowd arose immediately, and the spectacle was so impressive that it seems worth passing on. The team, the crowd, the visitors, all united in the demonstration—of one mind in patriotic reverence, regardless of the outcome of the game that was soon to be.

The entire feature did not consume more than five minutes. It was just a way of saying to our patrons, "This is Washington's birthday. 'Lest we forget'."

It so happened in this conference championship game that we could see the lineups through far enough to equip the team that was to start in the red uniforms, the team that was to relieve them in the middle of the half, in the white uniforms, and the team that was to start the second half, in blue uniforms. Our visitors on this night wore uniforms of a color that did not interfere with our using these three colors.

I should not recommend that this patriotic display be carried to such length in the average game. It so happened that these side lights with their surprise element could be carried through this once. However, the first five minutes of this patriotic feature could be used, time and time again, without injuring the team's stride. But the continued feature of playing the game through in the flag color scheme was unusual, and as most coaches will agree, risky.

THE COURT

One finds but few college or university courts now that are not regulation (94x50) so far as

area is concerned. The ceilings are also high enough not to worry or confuse the visiting team. Obstructions on the court, such as posts and supports, have also long been passé.

The One-Inch Restraining Line—But there are other difficulties that coaches must be constantly annoyed with. Bleachers along the side lines and at the ends of the playing court contribute their hazard to the game. The desire to seat as many people as possible causes this cramped condition.

A one-inch restraining line put on in white paint three feet inside of the regular two-inch black side line has relieved the situation for the passer when out of bounds. It gives him room to operate. The restraining line holds the guard back and permits the man, by rule, to pass without being hampered by too close interference.

Remove End Obstructions—All obstructions at the ends of the court should be removed at least ten feet from the end line, as players going under the baskets for tries at goal drive out of bounds from eight to ten feet.

Mark Side Lines with Black Paint—Playing lines should always be marked off with black paint. This shows up better under artificial light. When laying out other playing lines on

the court use white paint. This contrast is readily discerned and does not confuse the visitors in regard to the restricted area.

Two-Inch Tongue and Groove Flooring Essential in Construction of Basket-ball Floors—In convention halls, coliseums, and other places where new floors have been improvised especially for games, there is usually the annoyance of faulty floor construction. These temporary wooden floors are usually built over a concrete floor base. Regardless of how many joists are used under the floor surface, one-inch material should never be used. Such floor construction will cause great inconvenience in the execution of the dribble, as the ball will not respond uniformly to the bounce. Two-inch tongue and groove flooring will entirely eliminate this objectionable phase. By explaining these facts to the management of the coliseum or hall, the coach or the director can usually get the type of floor that he desires.

Keep Floor Wax Off Court—Whether in public halls where improvised playing floors are used or in one's own college gymnasium, the playing floor surface is nearly always a constant source of annoyance. In many schools the gymnasium floor is used for dances. While the home team may get somewhat accustomed to

this handicap, it is a decided disadvantage to the visitors. It is certainly a mistake to permit dances to be given on the court during playing season. However, if the gymnasium must be used for dances during other seasons, floor wax should, by no means, be used. It is too hard to remove.

Borax powder is the best dancing floor powder to use on a basket-ball court. Several moppings will remove this, and the powder itself is an anti-septic. Therefore, it lessens the danger of infections from floor burns and skin abrasions.

Powdered Resin for Slick Floors—Often the visiting team will sprinkle powdered resin on the floor when going out to warm up. This powder used freely compensates in a small way for the disadvantage of slick floors.

Mop the Court Often—In many places the gymnasium is used for assemblies and drill practices. Under these conditions the floor is always coated with dust and should be mopped every day. The moisture from the mopping seals the cracks and removes the danger of inhaling dust particles. This removal of the dust also provides a more stable purchase for the fast footwork of the player and keeps the ball freer from dust—a condition which aids materially in the execution of good finger technique.

LIGHTING, HEATING AND VENTILATION

Properly lighted courts are not in the majority. Strong bright lights in the ceiling directly above the baskets are abominable. The player's glance when shooting is always upward, and the glare from a bright light will demoralize his scoring ability. A diffused lighting system of white light, with all fixtures well protected by metal-wire guards, is the only practical one for a basket-ball court.

The strongest lights should be in the center of the court with ample provisions made for the side lines and the corners. If there is a balcony around the playing floor, lights can be placed under this, as it is the correct height from which to light the side lines.

Turn Heat Off for Games—On the nights of the games the gymnasium is too often overheated and too poorly ventilated. As a result both players and audience are many times in great discomfort. If the games are scheduled for seven-thirty P. M. and a large crowd is expected, the steam should be turned off in the gymnasium about five o'clock and all the windows thrown open. The windows should be kept open about one and one-half hours in order to fill the gymnasium with fresh air for both spectators and players. The heat should be kept off all evening. In these closely packed audiences the body heat generated by 5,000 people is

quite enough for physical comfort without resorting to the heating plant.

Ventilators—Every gymnasium should be equipped with ventilators to take care of the foul air. Teams as well as crowds grow stale in deoxygenated air. There is a certain simple type of circular roof ventilator that can easily and economically be installed. It is akin to criminal negligence to equip a gymnasium where packed audiences are expected, without installing ventilators.

BACKBOARD, BASKETS, BALL

Material Used in Backboard—The rule designating regulation backboards says that the backboard shall be made of wood, plate glass, or any other flat, rigid material painted white. Many conferences agree among themselves not to use the glass backboards, nor backboards of any other material except wood, as a change from wooden backboards to glass or to other compositions throws a basket shooter off his shooting form.

Color of Backboard—The rule designating the color, white, for the backboard is a very wise provision, as the black rim of the basket stands out in fine relief against white.

Six Regulation Baskets—Every basket-ball court should be equipped with six regulation backboards with standard basket attachments—

two regular goals for use in scrimmage practice and in games, and four extras for goal shooting practice.

Two Specially Constructed Baskets—In addition to these six regulation baskets, it is well to have two specially constructed ones to teach accuracy in the push-arch shot. These can be made by any blacksmith. Each consists of a regulation basket rim on an eighteen-inch arm extension and is attached to the backboard by a flanged or bolted device to insure rigidity.

Two such baskets will give players who are habitually steeped in carom shots a chance to try something different. Such practice is essential in the making of a versatile team, as there are certain areas on the floor where the direct non-carom shots can be used to great advantage.

Use Baskets Braced by One Steel Arm—Baskets with the old-fashioned side braces have practically disappeared. A new style of patented basket is now in use which gives better satisfaction in every way. Practically all dealers sell this new basket or one that is similar to it but does not infringe upon the patent. This new type of basket is supported and braced by one heavy steel arm which flanges and connects with the basket six inches from the backboard. Suspended from the metal basket rim is a net of white hammock twine. These nets, if strapped

on with bicycle or adhesive tape, will last through a full season of hardest usage.

Much criticism has been directed at these white twine basket nets, either on account of their wearing out too quickly or because they would slip out of place on the rim of the basket. Taping these nets to the rim does away with all objections. The white twine nets give to the game the decided advantage of contrast in color—the white net and the white backboard and the black basket rim. The white causes the black basket rim to stand out so conspicuously that it becomes an easy target at which to shoot. Leather nets and heavy tape nets do not have this advantage.

Use Medium Weight Ball—A regulation basket-ball can weigh from 20 to 23 ounces. It is a good plan to use a ball of medium weight—from 21 to 22 ounces. A medium weight ball will prepare a team for using either the minimum light or the maximum heavy ball which an opponent might introduce as a home game ball. This precaution will avert the catastrophe of throwing the players off their shooting form on account of the difference in the weights of the balls used in the various games.

On Dusty Floors Use a Ball with Oil in the Leather—Any ball that answers the requirements of the rules is official. But there are decided advantages to be gained under certain

conditions by using specific makes of balls. On floors that are a trifle dusty, a ball that has some oil in the leather is better, as the oil in the leather takes care of the dust on the ball and on the finger tips.

Wash the Ball—When the cover of the ball becomes too dusty or dirty, a good washing with harness soap will renew its luster and activity. This care of the ball should not be neglected, as the contact of the finger cushions with a clean ball assures better finger technique.

SCORE BOARD

Construction—A score board at each end of the court, well out of the way of the players, adds much to the general enjoyment of the game. These score boards should be constructed along the general lines of football score boards. They should be about six feet high and four feet wide so as to provide space for the lineup of each team, names, numbers, and positions, the progressive scores, penalties and violations, as well as the names of the officials for the evening.

These portable score boards should rest upon the floor some ten feet outside of the court and in line with the basket. They are best supported by triangular wooden brackets, the bases of which rest upon the floor.

All temporary information given out on the score board, such as names and numbers of

players, etc., should be shown on galvanized iron plates painted black and swung on metal hooks from the back of the board. White water-color letters and numerals should be used on these plates. They will show up from all parts of the court and can be used indefinitely. The lineup positions will be permanent and should be painted on the board with black paint.

Wooden Clock on Score Board—A large wooden clock, the dial of which is marked for the twenty-minute periods and which is large enough to be seen from all parts of the gymnasium, can be placed upon the top of each of the score boards. It is operated from the back and indicates the approximate time remaining to play.

Score Boards Introduce Personnel of Teams to Crowd—The use of these score boards is an excellent way to acquaint an audience with the personnel of the visiting team as well as with the home team.

In many places, local merchants have stimulated basket-ball interest by offering substantial prizes to the person picking the correct mythical lineup for the all-conference team—the authentic lineup in such cases having been picked by certain designated sports writers who have come to their decisions after much deliberation and after many consultations with men in position to know. When making these selections each coach

of the conference, as well as each official who has handled the games, sends to the authorized sports writers his pick of the first and second mythical teams. Out of these lists, the sports writers mold their mythical lineup. The contest for picking the all-conference team should open with the first game of the season and should close with the last. One week after the last game is played, the mythical lineup should be announced.

It is not unusual to have several thousand guesses recorded in a single college town. At one store in a certain town last year, 146 persons guessed the correct lineup of the first all-conference team. They then drew for the winner.

With the introduction of the double round robin schedules, together with the aid of well operated score boards, basket-ball players are definitely introduced to all patrons in their conference. Stimulated interest and larger gate receipts are the concrete results.

ARRANGING THE SCHEDULE

Selfishness in Schedule Making—Some coaches, feeling that a bargain well made is half won, place too much stress upon the arrangement of schedules. It is instinctively selfish for one coach in a conference to insist upon the arrangement of his own schedule so that his season will work up to a fine climax,

when such insistence will undoubtedly inconvenience others of his conference associates. It would be next to impossible for every member of his conference to plan so happy a schedule—especially would the weaker members of the conference be handicapped by such an arrangement.

Schedule Committee—The longer I work with coaches arranging their individual playing schedules, the more firmly I become convinced that the arrangement of schedules should be taken entirely out of the coaches' hands, as individuals.

Committee Does Away With Petty Bickerings—It is a splendid plan to have a committee of three, selected from the coaches' own group by the members of the conference, to arrange the playing schedule each year for the entire conference. This plan put into practice does away with the petty bickerings and small spites that sometimes are carried over from year to year and always rear their heads at schedule making time. A schedule committee appointed for this work should be thoroughly familiar with traveling situations and other necessary details of conference procedure. Such a committee will be, by the very nature of the appointment, put upon its honor to conduct itself for the good of all. It will usually act in a big way.

Rotating Schedule Is Out of Realm of Jockeying Coaches—Once a suitable conference schedule is arranged by the committee, it is very simple to reverse the order of games for the succeeding year, and, in the third year, to revert back to the schedule made for the first year. This establishes a system in schedule making which is out of the realm of jockeying coaches.

Double Round Robin Playing Schedule—A conference or an association composed of nine members (schools) makes an ideal organization for a sixteen-game double round robin schedule, which provides one game at home and one abroad *for each school with each school* during a single playing season.

Friendliness Grows Under This Plan—This plan gives the participating athletes an opportunity to visit each school in their conference each year. These visits continued throughout entire student generations promote feelings of genuine friendliness among the schools, and friendships among participating opponents that often carry over into the business and professional fields of later years.

Or Take Two Years to Play the Double Round Robin—Conferences that do not care for such an extensive championship playing schedule as is indicated by a double round robin played in a single year, can arrange to play it in two years,

by playing reciprocal games once every two years instead of each year.

Framing Schedules—Regardless of the kind of schedule arrangement made, see to it that there is some provision made to guard against a stronger rival scheduling all of his games with weaker opponents and sidestepping the stronger ones in order that he may be well up in the percentage column of games won, and thereby win a championship. Many paper championships are won in this way. A double round robin schedule shuts out the possibility of a greedy coach framing his schedule for a list of wins. A coach playing a double round robin in a single year learns to rely only upon endurance and skill. A championship thus won is incontestable, and the victor must be worthy of the spoils.

Coaches Jockey for Second Semester Men—Under former methods of schedule making, when each coach worked out his own schedule and sought his own advantage, much jockeying for time was done. For instance, if some star players were to be eligible in the second semester, the wily coaches would try to schedule with their most formidable opponents during the second semester. The new method of committee arrangement does away with much, if not all, of this seeking of advantage. A game coach should be willing, for the good of his conference,

to play his schedule with the material at hand, and at a time when it best suits the conference schedule arrangement.

The Ideal Schedule—It would indeed be difficult for the coach himself to try to define an ideal schedule. The best schedule is a fair one arranged by a competent committee with the best interests of its association at heart.

Consideration for the faculty of one's school should certainly be an item of much concern in the arrangement of an ideal schedule. Plan to save all of the players' class time that you possibly can.

On account of being away from school the least possible time, Thursday, Friday and Saturday are the best days for a three-game trip. This gives Sunday for the players to get home and to recuperate for class work on Monday.

The one-game trips are best arranged for Saturday nights, as the team can, if necessary, leave Friday night and arrive Saturday morning in time for a good rest before the game is called. From four to eight hours in a town the day of an away-from-home game is long enough. Experience leads me to believe that one night and one day spent in idling about the town of your opponents is too long. Too many distracting factors enter in to divert the players' minds from the real purpose of the trip, namely, the game.

Conduct of Team Away from Home—Meeting fraternity brothers and former acquaintances in the long interims before the game, mixes too much pleasure with serious business. Keep the minds of your players on the game to be played. Do the pleasure seeking after the game is won. All business and no “joy rides” before you meet the enemy and make him yours, is a sound admonition to those who are new in the game.

A team should plan to arrive in the town of its opponents on the morning of the game, in time to take a mile hike, to look the court over, and to try a few shots at the basket, before noon. Luncheon and a nap will take care of the afternoon. There should be no leisure time for outside connections, or else your team may turn up on the court minus its characteristic stride.

All-Conference Teams—Under a double round robin playing arrangement, the all-star teams are worthy of their places in the sun. The patrons of the game all over the conference get acquainted with the personnel of the various teams and with the individual technical worth of their all-star players; and they can, along with the various sports writers who have watched the games, intelligently pick the superior performers whose names will be placed on the mythical team.

No Official Championship Award—No conference officially awards a championship. These

are always imaginary trophies. The newspapers in their championship awards express the fancies of the sports followers.

Comradeship of Mythical Team Mates—When these star players are grouped together in mythical array on the all-conference team selection, a subconscious feeling of comradeship between the fortunate players of the schools represented arises and interlinks the lives of these men, in this one aspect at least, for all time.

There is little danger of spoiling a man by placing him on an all-conference team. He has probably learned by the time that he reaches there, through the ups and downs that have brought him this distinction, that it has come through chance as well as through merit. He will probably realize, also, that this effort to pick the winners is but a symptom of the inherent spirit of competition that is so thoroughly ingrained in each of us.

We play games to emerge as victors. The player has a right to try to make the best player in his position in the conference. This ideal will develop his highest sportsmanship as well as his most perfect execution. The spectators, whether friends or foes, will sit *en masse* to pass judgment upon him as a player. He is well aware of this and competes with every player in his conference for the approval of the spectators.

The World and the Winner—The world loves a winner, and after the season is finished, conference enthusiasts wait anxiously for the press notices of the mythical all-conference teams. They will be anxious to see how many of the championship team will be placed, through public opinion, on this imaginary super-team.

The Playing Season—Most conferences limit the number of games their teams are to play. If permitted to start a playing season by December 15, a team can easily play sixteen to eighteen games by the first or second week in March. And if some of the games fall on week-ends, as they should, very little class time will be lost.

Christmas Holidays—Most conferences permit their teams as many as two non-conference games. Do not let the players have too long a holiday period. From the time school is dismissed for the holidays until the day after Christmas is long enough. However, there may be exceptional cases. This holiday period is a splendid time for intensive training, and for the playing of a stiff non-conference game. The players will learn much from teams that are their superiors. A defeat on this holiday trip at the hands of a non-conference team will be useful in strengthening the team for the conference schedule. The different styles of attack and of

defense that your team will meet in a non-conference game will add to your team's versatility.

Shape Your Men for Just One Game Ahead—A coach should shape the minds of his men for just one game ahead, and *that* always the next game, whether easy or hard. This will help to avert mental staleness—the bugbear of all high-strung teams.

The Coach Often to Blame for the Staleness of His Team—Indeed, a coach is much to blame if he permits his team to get stale. If he is in any way disappointed over the arrangement of the playing schedule, he must not let the team know it. If the hardships of the schedule worked out by the committee are evident to the team, and the players should mention this fact, as they undoubtedly will, the coach should dwell upon the fairness of the committee and its desire to put the best interests of the conference above the interests of any single member,—and thus quiet any uneasiness in the minds of his men. A coach should remove the nervous irritation of worry from his players, who are preparing physically and mentally for a long grind. He must reflect courage and fine determination in dealing with his men. Even when things look darkest, he must conceal his worries behind a grin. He should radiate confidence and optimism, and thus talk himself and his men out of much of that mental state called “staleness,”—which is often more imaginary than real.

OFFICIALS AND OFFICIATING

Basket-ball is demanding better officiating every year. Although still in its infancy, this little giant of sport is calling outstanding men in the athletic world to act as professional officials. Many college athletes after graduation turn to basket-ball officiating as an avocation. After their own game days are over, officiating becomes their hobby. They are reluctant to give up the old experiences altogether.

An enviable athletic record back of an official is a fine initial background. It gives him the prerequisites of success. Audiences will be for him, unless they have pronounced reasons to be otherwise.

Officials Need Not Have Been Athletes— But an official need not have been an athlete previously in order to make good; for the official's lasting success is measured by his ability to control situations. The handling of this game, when going at top speed, is by no means a matter of mild administration.

The field of basket-ball officiating is not as yet overcrowded, and is always in need of keen students of the game who have a well defined sense of fairness and a quick vision—men who are earnest in their efforts to develop and to protect this sport.

*Remuneration—*At best, the official's job is a thankless one, with small pay for the responsi-

bilities that are assumed. However, with schedules arranged for games throughout whole weeks of the entire season as is now done in various conferences, officials can work approximately six nights a week during an entire playing season at an average remuneration of \$15 to \$25 and expenses for each game. During a single season of two and one-half playing months, it is possible for the basket-ball official's remuneration to aggregate \$1,200 to \$1,500.

Official's Job a Lonely One—In round numbers, this financial compensation seems ample for the services rendered. But when one takes into account the concentrated traveling experiences, necessitated by trying to keep up with basket-ball schedules, the overland trips by car in wintry weather in order to meet appointments, and the vague, indefinable loneliness of heart of an official during the season, financial remunerations, however pleasing, cannot wholly atone.

When traveling from one town to another, an official frequently meets a team for whom he will work that evening. He cannot conscientiously, nor consistently, fraternize with either coach or players enroute. If they indicate an unrestrained chuminess toward him, much as he should desire this friendliness under other conditions, he will be forced by the nature of his mission to excuse himself from their company.

When the official reaches the town where he is to work a game, he will be very unwise to accept any hospitalities from the home team or from their coach before the game is played.

At the gymnasium he must insist upon a separate dressing room. It is imperative that he not dress with either team.

A wary official, who is heedful of the back-fire of games, will not discuss teams for whom he is working, neither their merits nor demerits, with anyone. His business is to run the games on the court and not to render opinions off the court until the season is over.

He must not permit coaches nor captains to warn him of supposed illegal play of opponents. An official can profitably inform such complainants that he will watch every man on both teams. This is his business—an unsociable one at best.

Personality—An official must have a pleasing, forceful and dominant personality. He must be clean, courteous and courageous. He must be a good judge of human nature and must have an established reputation for honesty and fairness. His personal, business and professional life should be above whisperings. He should be in tiptop physical condition so that he can follow the ball closely during the entire game. In short, he must at all times be able to command the respect of players, coaches and

audiences. While at his work, he should be considered in the light of a high-grade specialist.

Spectacular Officiating Undesirable—A true-bred official will submerge his own personality into the play of the teams. He will not overshadow the play of the game by any of his own spectacular gyrations, however versatile his repertoire. A basket-ball audience goes to see a basket-ball contest during the playing periods, and not a vaudeville. However, an official, with something out of the ordinary in stunts, might display his talents, if called upon, between halves.

Appearance and Dress—An official must be neat and clean in appearance. He should be clothed in a uniform distinctive. White is no longer a desirable color for officials to use, as one team or the other is almost sure to use white. In these instances, an official in white confuses the team-passing. The official's uniform should so stand out before the players that the contrast will shout, "Don't pass to me."

In many conferences, the officials of the game wear standardized outfits. This move is in the right direction.

Knickerbockers, instead of long trousers should constitute part of an official's correct attire. They do not bind at the knee, as do the long trousers, and they give the referee a more agile appearance upon the floor. Much of the official's hidden power lies in his appearance

Exhibit
S-1



Exhibit S-1
*Showing official in correct
officiating attire.*

on the court. He wants to be able to get his decisions across to the audience and to have them accepted in the spirit of fair play. To do this, he must muster into service his every available asset. His court appearance should be a studied thing instead of an unimportant detail. Inately, an official desires to please the crowd.

The Umpire — The umpire in a basket-ball game has a much easier time than does the referee. The umpire's paramount duty is to keep the back court free. Play and decisions are not so complicated there, and the ball in its vagaries does not bother the umpire much, unless he should be called upon to give a decision to substantiate that of the referee.

The Referee—The referee is the superior officer of the game. Upon him depends the tone of the contest. He can carry the game along when it is dragging, by retrieving balls quickly, and by pleasantly urging both teams to speed up their game.

The referee must make quick, determined, confidence-instilling decisions, when disputes over the rules cloud the horizon. He cannot afford to make a mistake in his interpretations; for, aside from the wrongful loss of the game to one side or the other, he would, by a mistaken decision, suffer irreparably as an official.

Referee Must Know the Rules—It, therefore, goes without saying that it is a referee's first duty to know the rules—backward, forward, and upside down.

Many times, referees have accepted the responsibilities of important games without first mastering the rules. Such referees may have played in many intercollegiate contests and, in their day, may have played great games, without ever having had a thorough knowledge of the rules. No official should accept the responsibilities that the work of officiating carries with it without first having served an apprenticeship of officiating in at least a hundred practice games. He will then, if he has a fair amount of native ability, be worthy to accept the fee that goes with an important match. A serious blunder in a referee's first game may forever end his career as an official.

True to the laws governing development, officials improve with experience. Tight decisions, night after night, make officials more competent as well as more confident. They rarely make

the same mistake twice. Year after year at their regularly organized officials' meetings, many moot questions that have arisen during the year are brought up for open discussion, and bring decided benefit to all—especially to men who are new in officiating and lack the confidence that experience will bring.

For instance, if an argument over a score should arise between the managers of the two teams, and no official scorer had been previously appointed, the referee must be so seasoned by experience that he will immediately be ready to decide in favor of the smaller score. Or if an argument should arise over a difference in playing time, the referee must unhesitatingly decide in favor of the longer playing time. Whatever the crisis, the referee must be seasoned enough to meet it unflinchingly,—if he expects to make good.

The Coach's Duty to the Referee—The coach's first duty to his school and to himself is to select a referee to whose judgment he is willing to entrust all the hazards of the game. The coach must believe in the official he has chosen. It then becomes his duty as host to protect this official from all the invasions of a thoughtless and sometimes hostile crowd.

Due largely to the simplicity of the playing rules and also to the close proximity of the players to the spectators, the average basket-ball follower is much better versed in the playing rules

than are the average followers of other sports. Therefore, the popularity of the official who makes an error of decision in this game, as he undoubtedly will at some time, is in much greater jeopardy than in any other sport.

The average basket-ball audience is not schooled in charity. Spectators in their excitement forget that there is no animosity in the referee's mind, when he calls a foul on a man for an infraction of the rules. Too often, they take the referee's decision as a personal affront to a player of the home team.

The only salvation for the sportsmanship of many audiences throughout the country, lies in a sort of an extension training course, wherein sportsmanship can be ingrained while the audience is unaware.

Teach the crowd, in its saner moments, by means of printed forms and otherwise, the real meaning of sportsmanship. Programs, bearing pictures of the stellar players of the conference, will help to remove the altogether too provincial aspect from the game. A game, instead of contributing to narrowness of mind, should broaden the point of view. Information concerning changes in the rules can also be included in these pamphlets. These changes will be scrutinized by many patrons before the game starts.

Spectators Must Be Tolerant—When in a fiercely contested game, play after play, travels with such unchecked swiftness, decisions must

come equally as fast. This fact always carries its chance for the best of officials to err.

Spectators must awaken to the difficulties confronting referees in games; and, however disheartening a break may be on account of an official's error, they must learn to make allowances and to accept the chances that the game may bring. The game and the sport that it brings is the thing worth while, and not the winning—especially, at the sacrifice of one's sportsmanship.

The coach or the director of the home team is, to a great extent, responsible for the crowd's courtesy to the officials. If discourtesies are forced upon the official, the least the coach can do is to ask that the game be halted and then to take the floor in defense of sportsmanship.

The coach in such a position should inform the crowd that this referee was selected to run the game, by men who believed in his competency and fairness; furthermore, that his decisions must be accepted as coming from a man whose courage and judgment entitle him to the respect and the courtesy becoming a college audience.

It would be needless to discuss the possibility of the unfairness of a seasoned official. He has spent years in building his reputation of honesty and efficiency. It would be foreign to all processes of logical reasoning to think that he,

by one false act, would tear down what he had been so long in building.

Coaches, who find it hard to believe in the integrity of officials and who, on this account, find it especially difficult to select them, would do well to work a few games themselves; and, by so doing, strengthen their faith in the official's honesty of purpose.

The Duties of the Referee Before the Game— If the referee is sure that the measurements of the court are correct, and that the baskets conform to the requirements of the rules, it is best for him not to appear on the court until about two minutes before time for the game to start. But he must be punctual. A tardy referee is demoralizing to the game. He upsets the whole works—players, coaches, and spectators alike.

In the early part of the basket-ball year a referee who will be seen on the home court several times during the season is justified in seeking a friendly relationship with the crowd. It is well for him, at such times, in a short pre-game talk to discuss the changes in the rules, the violations, and the penalties with the audience. An enlightenment of the crowd brings about greater interest, and consequently greater gate receipts. And if the official can indulge in this bit of friendliness with the crowd the road is made easier for him. Indeed, there is no reason why an official should be considered an

enemy to either team, and every reason why he should be considered a friend; for, throughout the season's strenuities, a true-blue official forms whole-hearted admirations for many players that he sees in action upon the various courts.

In the event that there are no pre-game announcements to make to the audience, about two minutes before the game starts the official should go on the floor, designate the official timer and scorer, and then call the two captains of the competing teams together for final instructions.

The Referee in the Game—The referee must announce his decisions in a clear, snappy manner. He should designate the player making the foul by placing one hand upon the offender and by raising the other high above his head. When calling personal fouls, he should make the spectators fully aware of the nature of the foul by a gesture, which will simulate the foul.

Referee at the Tip-off—Both hands should be used in throwing the ball up at center, as this execution is much more accurate than if one hand only is used. An alert referee will have plenty of time to get out of the way of the players after the toss-up, as the rule states that the referee "shall blow his whistle when the ball reaches its highest point." This height must be greater than either of the men can jump—

after which the ball must be tapped by either one or both of the center players. This gives the referee time to slip behind the shorter of the two jumpers (as the taller man will usually control the tip-off) and be out of the receiving lanes before the play comes his way.

At center, it often happens that one of the players, just before jumping, steps back with one foot out of the circle. This is a violation of the rules. The referee, by lightly tapping the offender's tendon Achilles with the side of his foot, can force the jumper into the circle before the ball is thrown up.

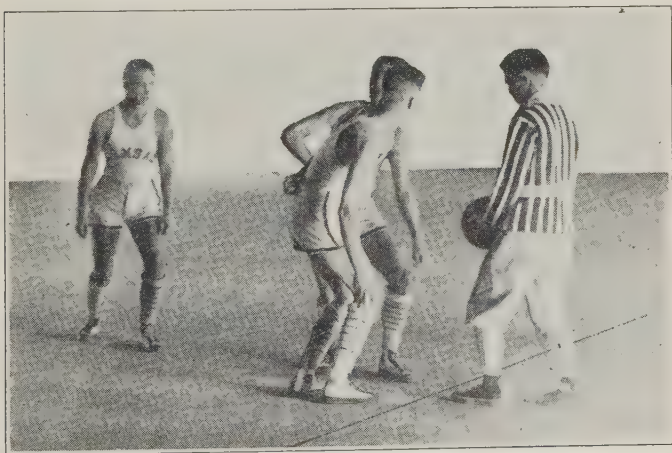


Exhibit S-2

Referee standing in proper location to put a held ball near the side line into play.

The Referee on Held Balls—The referee should always keep the inside court clear for

Exhibit
S-2

play. If a held ball is called near the side line, the referee should slip through between the two players and stand toward the side line. This act frees three areas in which the players can tip the ball. If the referee tosses the ball while he is on the inside, he would close one of the most vital playing areas. Exhibit S-2 shows the referee in proper position on this play.

The Referee and the Dribble—The referee should not crowd a dribbler. The dribbler's pivot and back pass to a trailer would throw the official in an awkward position. Neither should the referee be too far in advance of the dribbler; for, if the team that is using the dribble is advancing against a set five-man defense, the referee, while watching the ball, will suddenly find himself backed down against the first-line defensive wall. Invariably, this act will block one of the defensive men off and will give the offense an advantage that they have not earned. In such an instance, the referee should cut out toward the side line and be ready to cut in behind the defense when the attacking team takes a try for the basket.

The Referee on Out of Bounds—When the ball is out of bounds, the referee need not run to the exact spot to order the ball played in. If expedient, he can stand in the center of the court, on a line with the spot where the ball went out, and denote with his arm and hand the

exact spot where the ball is to be played by calling out, for instance, "Play, Nebraska."

In crowded halls where pandemonium reigns and the official's voice and whistle cannot be heard above the din, ribbons which denote the school colors of each team can be worn on the referee's wrists to serve as signals. In this case, the referee will signal the team that should take the ball on the out of bounds, with the arm bearing that team's color. In this way, much delay and difficulty can be avoided, and much of the official's vocal power can be saved.

Final Hints to Officials—Many referees in their travels acquire the reputation of being "homers"—that is, of giving the benefits of their decisions to the home team, and in this way continuing in popular favor with home audiences. There is no greater mistake made in "officialdom" than for an official to do this, and a "homer" cannot properly belong on lists of first-class officials. Such seeking to win popularity at the expense of one team or the other is utterly unfair, both to other officials and to the teams for whom he works.

There is another type of official who is a menace to the game. He is the one who consistently goes on the court looking for trouble. He is always showing his teeth. He is the file instead of the oil cup in the machinery, and

is never very popular with coaches, players, or audiences.

The interest that such officials have in the sport resolves itself into how much financial remuneration they can realize from it, and not into how much fine service they can put into it.

The popular official is the one who devotes himself cheerfully to his task, and, oblivious of crowds or of comments, renders his decisions decisively and fairly.

EQUIPMENT OF PLAYERS

The best in a player's equipment is none too good. Neat, well-fitting and durable basket-ball outfits enhance the players' chances of winning. They look the part of champions. It is then up to them to acquit themselves as such. Legitimate competition in appearance is a natural and desirable thing. Clean competition in athletics is another.

We must not lose sight of the fact that the patrons of the game are pleased at the spectacle of two well-groomed, high-powered aggregations struggling for supremacy. The players are the picture; the spectators, the background.

Two Sets of Uniforms Desirable—A team should have two sets of uniforms—one for use in practice, the other for use in games. This separate outfit for practice helps to keep the one used in the games new and clean, and

the men get the psychic effect of feeling well dressed for the game. When soiled, these outfits used in the games should be dry-cleaned, as tubbing will cause the vivid colors used in the suits to run.

Launder Practice Suits Once a Week—The practice outfits should be laundered at least once a week. Clean outfits keep up the practice morale. If reporting for practice day after day grows irksome, the odor of clean outfits does its bit to make the grind easier. Remember this.

Cotton Gymnasium Shirts—For practice, I have found it expedient to use a cotton gymnasium shirt under a white regulation wool jersey. The wool used day after day chafes and irritates the players. During games, the regulation wool jersey is all right, as the player in his excitement will forget small irritations.

Shoes—The basket-ball shoe is the first thing to consider in selecting playing equipment. An athlete is no better than his feet. He must be correctly shod to give to the game what his coach has a right to expect. A medium-weight, soft, rubber-sole shoe with a heavy canvas upper and a toe-lace is the most popular as well as the most desirable. Let the men choose the weight of their own shoes, as most players have well-formed opinions of what weight shoe suits them best, and you will be taking an unneces-

sary risk by trying to re-educate the foot-temperaments of the players.

Some coaches use an extra heavy shoe in practice and a light-weight shoe in the game. Efforts are being made now with several shoe concerns for the manufacture of a specially designed practice shoe, with a thin lead plate in sections vulcanized into a heavy rubber sole. The difference in the weight of such a practice shoe and the light shoe used in the game would make the player when in the game feel as if he had wings.

Rapid strides have been made by manufacturers in the construction of basket-ball shoes. Formerly, all basket-ball shoes were made on an overshoe last. But along with the constantly increasing interest in the game came new attention to shoe construction. Now they are made on a specific basket-ball last. Even the heels are brought down to fit.

The secret of proper construction lies in the fit of the shoe around the arch of the foot. When the player rises on his toes ready for a quick shift, there should be no lost motion between the foot and the shoe. No shoe on the market at the present time has entirely taken care of this defect. But any standard brand of shoe takes cognizance of the three important features—lightness, adhesion and durability.

Sulphur is used in the manufacture of all rubber goods. For this reason, the soles of the

shoes should be washed with benzine or gasoline just before the game starts. This removes the sulphur and other particles from the soles and opens the pores of the rubber, so that the sole can hug the floor and give the player the proper foot-purchase.

Mat of Powdered Resin—Many coaches use a mat of powdered resin at the side lines to obtain proper shoe adhesion. Belt dressing is another method employed to get this same result. Whatever method is used, the captain must obtain permission from the referee for his men to step off the court to treat their shoes when time out is called, or else the player will get a foul for leaving the court.

Inner Soles—Do not use stock inner soles to fill up the extra space in shoes. These inner soles will not fit the lasted shoes. They will pinch at the sides and will cause blisters and calluses. Get a snug-fitting shoe, and if at any time the foot shows symptoms of hard wear, use adhesive tape liberally over the area involved. Tape before the skin is broken. If there is play in the shoe, use an extra pair of light wool socks to take it up.

Stockings—Wool socks give life to tired feet. See that the athlete has them. Use a cheap white cotton sanitary stocking next to the skin, with the footless stocking over it, and a short soft wool sock over these. These two pairs of

socks will allow the friction to come between the socks; whereas, if only one pair of socks is used with the footless stocking, the friction will come between the skin and the sock, and will cause a blister.

If the players' feet show much tenderness at the beginning of the season, it is even better to use two pairs of thin white cotton socks with the all-wool sock and the footless stocking.

It is not necessary to have a basket-ball stocking as long as a football or a baseball stocking. The better plan is to have them made six inches shorter than they are ordinarily, so that the unnecessary bulk around the knee guard will be done away with. Emphasize the use of knee guards and stockings. There has been a tendency to do away with the footless stocking. This should not be done. Men wearing stockings have two chances to find their team mates; while men without have but one. In close scrimmage, the color in the stockings often shows more readily than does the color in the jerseys. Men learn to play to the color in the jerseys and in the stockings. Take away the stockings, and you lessen the power of your offensive.

By using both stockings and knee guards, players are apt to show more nerve in diving for a loose ball. But, by all means see that the stockings are kept clean. Much foot trouble can be avoided by this care.

Suspensory—Every player should wear a jockey strap while practicing or playing. This will prevent injury and varicocele.

Have the suspensory laundered at least once a week in order to prevent "gym itch." Warm water and ivory soap will keep the suspensory soft and pliable.

If the abdominal wall is weak, use a wrestler's abdominal suspensory instead of the lighter jockey strap. This precaution might avert a hernia.

Knee Guards—The best knee guard is a light felt one with a small leather cap on the outside. This cap protects the knee from bruises. A strip of elastic at the bottom of the guard serves as a supporter for the wool stocking. Do not use a guard with elastic around the upper part. This pressure against the insertion of the ham-string muscle interferes with locomotion. Two strips of leather sewed to the sides of the felt will hold the guard erect, and the elastic at the bottom will keep it close to the leg.

Jerseys—A woolen supporter-type of jersey, buttoning under the thighs and over the jockey strap, is the most suitable. This fits more snugly, and the wool, by retaining the heat, keeps the body from cooling too rapidly. Choose a jersey with roomy openings for neck and arm holes. Such a style gives more freedom of motion.

Teams that can afford them should have two sets of woolen jerseys—one set white, and the other of some brilliant hue, signifying the colors of the school. Exercise care in selecting your colored jerseys. White or some bright color will show better under artificial light than will the more sombre hues.

Two Playing Outfits If Possible—When teams can be outfitted in two separate sets of playing suits in addition to the practice outfits, the set in color can be used for the home games, and the white away from home. If it works no financial hardship, this plan of having two playing outfits is ideal. Several school conferences have this arrangement as a standing agreement, and thus avoid the necessity of preliminary correspondence in order to eliminate confusion in the colors of the players' uniforms.

Misfits Used in Practice Improve Passing Vision—Often, in practice, I use uniforms at variance with the team's regular colors, in order to make it difficult for the men to find their team mates. Sometimes we use misfits in any color, so that the men will be forced in passing to look for something other than color. This improves their passing vision for close competition in games. Freshmen often wear their traditional opponents' Varsity colors. This gives atmosphere to the scrimmage and encourages

traditional rivalry between your school and your friend, the enemy.

Pants—Flannel basket-ball pants are better than the regulation cotton pants, because they retain the heat around the hips and back, and display more class on the court. With light removable padding in the hips, with short, wide-cut legs, and with laces either at the front or sides to insure a snug-fitting waist, they are the ideal pants. However, regardless of the material used, the pants should be white in color. When the colored shirt is used, the white pants break the monotony and will often relieve a color that does not have all the advantages of optic attraction. If color is used on the pants, it should be only a thin silk ribbon trim around the leg and down the side seams, the same shade as the jersey.

Warm-up Outfit—No player's outfit is complete without the warm-up suit. A race horse is always blanketed when warmed up. So should the athlete be. We designated an outfit for a knitting goods house with hood attachment on a two-piece woolen pajama suit, which fulfills all requirements of a warm-up outfit. The hood protects the back of the neck. The brachial plexus, which controls the nerve supply to the arms and shoulders, arises in the region of the neck and must be protected, for so much depends upon the action of the shoulders and arms in

this game. A fleece-lined hood stitched to an ordinary sweat shirt will serve the purpose as well as a specially designed outfit. During practice, all men who are not active in scrimmage should wear warm-up clothing. Many stars have failed to come through because they have stood around unprotected after practice. Neuralgia will settle in the arms and shoulders and so stiffen players that they will lose their best coordinations.

The above-mentioned articles of equipment are all that a player needs. Discourage the use of too much equipment. Additional equipment encumbers men, both mentally and physically. It is better for them to have too little in equipment than too much.

Property Man—In connection with the player's equipment, I am mentioning the property man. So essential is he in caring for the players' outfits and for athletic supplies in general that in a short time he will save the price of his salary.

After practice hours, the equipment should be checked in to this property man, who should hang each outfit on an individual coat hanger. At the next practice the property man should check out the outfits and exchange clean equipment for soiled. These clean outfits keep the men in fine spirits and help to ward off what coaches may mistake for staleness. The players'

street clothing should be kept in their own lockers in the Varsity dressing room, and should be cared for by the players themselves. The squad should assemble and dress together each day.

On trips, the property man should care for the players' outfits in regulation army barracks bags. For a squad of ten men, two such bags are enough for all outfits and for two practice balls in addition. When starting on a trip, each player should wrap his own playing equipment separately and turn it over to the property man. Each man should care for his "personals" in his own traveling bags. This arrangement will avert any confusion at the end of the trip, and you will have the satisfaction of knowing that none of your players are going to turn up short of equipment at dressing time. The new men on the squad should assist the property man with the team luggage.

This plan of checking-in to the property man should work away from home, just as it does at home. After the game, each player should check his outfit back, for the property man to dry in the hotel rooms.

When possible, combine the duties of your property man and your team trainer into one. One man handling the combined jobs will justify the expenses of his trips. He will know the various peculiarities of the men—their idiosyncrasies—and will be well fitted to design their

protective equipment, when necessary. He is a good moralizer, and, when situations arise that cause incompatibility, he is often a handy intermediary between the coach and the players.

PRACTICE AND CONDITIONING

Two weeks after school has opened, call a meeting of all men who expect to come out for the basket-ball squad.

Arrange for Medical Examinations of All Candidates—At this meeting, make arrangements for a medical examination of every man expecting to try out for the team. Make this examination compulsory. If the coach is qualified to give these examinations himself, it is in his favor, as he can by this personal contact strengthen the players' confidences in him. This is an excellent time to begin to train fear out of the players' minds. Immediately, the men will begin to feel that they will not need to worry about their own physical well-being—coach will take care of that. This creates a splendid foundation for the strenuous acquaintanceship that is to follow.

Whoever the medical examiner may be, he must see to it that the player gets a thorough examination of kidneys, lungs and heart.

Outline Your work—At this first meeting with the candidates, a general plan for the year's work should be put before them. Three

one-hour practices a week should be held, from about the middle of October to the close of football season,—that is, after the Thanksgiving recess.

When the holidays are over, hold two-hour practices six days a week. You cannot accomplish much in the short season if you do not drive and drive hard. It takes patient, laborious work to instill fundamentals. If the team should show a mental slump from the grind on fundamentals or from overexertion in team play, lessen the intensity of the practice periods, according to your best judgment; and switch off on games that require little physical effort but give much mental relaxation, such as Crow and Crane, occasional basket-ball relays, and others that will be discussed in Chapter V.

Afternoon Practices—Practices held in the afternoon are better for the men than those held in the evening. Afternoon practices give the men opportunity to eat regular meals after strenuous exercise, and also a chance to spend their evenings in study. By adopting this practice schedule, the players can relax well before going to bed; while men who practice at night often find it impossible to relax. Every athlete needs at least eight hours of sleep.

Night Practices—Some coaches ardently advocate night practice sessions because they accustom the players to shooting by artificial light.

Occasional night practices are not mistakes, but the advantage gained by making them the rule is more than offset by the fact that the men are forced to miss their regular evening meals. Under such a practice-schedule the players will soon show, in their playing efficiency, the effects of irregular habits of eating and sleeping.

The Coach on the Practice Floor—A coach should strive to keep physically fit. On the practice floor he must be agile and able to demonstrate corrections of errors. No coach should come out for practice without a full player's uniform and sweat clothes. Then, when errors are made, he can jerk off his sweat clothes and go into the game like a player—to demonstrate and to execute the play as it should be. The eyes are twenty times stronger than the ears. Therefore a coach in uniform can more adequately demonstrate his theories than can a coach in street clothes try to explain them.

If he goes on the floor in street clothes to demonstrate and makes a difficult shot, the players will look upon it as an accident. But if he executes the same shot in player's uniform he will "sell" it to the players, largely because he looks the part of an athlete.

Football—Basket-ball Candidates—All basket-ball candidates who are out for football should not be permitted on the court until after their

football season has ended and they have had an enforced rest of two weeks.

Spend Your Time Upon Eligible Men—A depositor puts his money in a bank that he thinks is secure. So should the coach spend his best time upon the men who are likely to stay eligible. Do all in your power to keep the men eligible. The personal contacts that will bear fruit in these instances are discussed in a later chapter on inspirational coaching. The majority of men are worth working with to keep them eligible. However, there are some few who have basket-ball ability, but not the desire for an education. These men in college competition are hopeless. Do not waste your time upon them, but give more time where it is worth while. These efforts in behalf of worthy men will strengthen your hands for many crises that are sure to come.

Setting-up Exercises—Start at the beginning of your season with a definite program of setting-up exercises; for instance, (1) the heel and toe; (2) the full squat and full bend; (3) the push-up dip; and (4) the full-squat dip. Only a few minutes will be consumed in the execution of the entire repertoire.

A player should spend about five minutes in his room, daily, in the execution of these exercises. Make the men feel that a failure to execute these exercises daily in their rooms is a

violation of their training schedule. Let them know why these exercises are important. Faithfully executed, they are the surest prevention against sprains and injuries due to weak ligamentous attachments. Consistently followed, they will strengthen the fingers, wrists, ankles and knees so that very few injuries will occur from scrimmage.

So important do I deem these simple exercises that both our freshmen and our Varsity take five minutes of their practice session daily for such drill, in addition to the daily five-minute drill in their own rooms. We limber up with these exercises just before starting the drill on fundamentals. By reducing our early injuries to a minimum, we feel well repaid for the time spent on these exercises. "An ounce of prevention is worth a pound of cure" is trite but true. Directions for giving these exercises to the players follow:

Heel and Toe—Rise slowly on heels and toes alternately about ten or twelve times.

Full Squat—Assume an upright position with the arms at the sides. Come slowly down to a full squat, at the same time stretching the arms out to the front. Rise to a standing posture with arms slowly stretched above the head. Execute a full body bend, with knees kept straight and the finger tips touching the floor. Repeat this alternate exercise slowly three or four times.

Push-up Dip—Get down on all fours with the body extended parallel to the floor and with fingers and toes supporting the body. Execute a full dip without letting the abdomen, chest, or thighs touch the floor. Then push up and dip again. Repeat this exercise twelve times without allowing the hips to sag.

Full Squat Dip—Stand in upright position. With arms out to the sides to perfect the body balance, extend the right leg to the front and sink slowly to a full squat on the left foot. Without touching the floor with the hands or with the extended right leg, put entire weight on left leg and thigh, and depend upon the strength of the knee and the hip joints to bring the body again to an upright position. Finish with a rising skip. This exercise should be repeated three times on each leg twice daily.

Stretch—All of these exercises should be slowly *stretched through*, quite after the fashion of a contented cat before a fire. Stretching and plenty of it, keeps the spine supple and the body agile and youthful.

Players Should Toughen Their Feet—Players should take care of their feet and guard against trouble. They should dry well between the toes to keep from softening the skin. If the feet perspire too freely, a combination of boric acid, alum, and talcum powder sifted into the shoes is splendid for reducing foot moisture and

toughening the skin. Tanic acid solution, salt and vinegar, witch hazel and arnica, alum water, bichloride of mercury solution (one tablet to a pint of water) are all good bath solutions for this same purpose. Compound tincture of benzoin applied with a paint brush is also a good foot toughener.

If unable to toughen the players' feet sufficiently before the first scrimmage, use squares of adhesive tape over the parts of the foot surface that gets the most friction. Remove this after the scrimmage, as it will, if worn too long, make the skin very tender.

Indigestion Due to Cold Feet—Some players will suffer severe cases of indigestion brought on by getting their feet too cold. Such players should wear heavy woolen socks, both on and off the court, and should toast their feet well before retiring. If a player is subject to acute attacks of indigestion, and physicians are reasonably sure of their diagnosis, see that he has an electric-heating pad to keep at his feet during his sleeping hours. The plantar nerves that supply the soles of the feet have their origin in the spine in close proximity to nerves which control the blood to the stomach and intestines. Cold feet interfere with the blood supply controlled by these nerves and thereby contribute to the causes of fermentation of the stomach.

Players Should Dry Thoroughly After Baths—Many cases of severe neuralgia of the face, head, neck and shoulders can be prevented by thoroughly drying after baths. Athletes are especially careless about drying the hair and the nape of the neck before going out into wintry weather. Hot water in the showers should be used very sparingly. Follow the warm water quickly with a cold dash and a brisk, thorough rub with a turkish towel.

Scales and Weight—Every dressing room for athletes should be equipped with an accurate pair of scales for men to weigh when going into practice and again when coming out. The story that the scales and their accompanying charts tell from day to day gives the coach a pretty good line on the physical condition of his men. The medical examiner, when making the physical examination, should tell the player about how much he should gain or lose to be in excellent playing condition. This information will make the player faithful in his training and in the daily postings of his weight chart; for he will be anxious to arrive at perfection.

A player should not progressively lose weight during the regular playing season. From two to four pounds is considered a normal loss during a single hard practice or during a game. A heavy water drinker will lose much more weight than the player who drinks but little. Many

men consistently gain weight during playing season.

The Eye Symptom—The eye is a splendid index to a player's physical condition. The fatty deposit below the lid is first to disappear when a player is dissipating or growing stale. If such a symptom becomes evident, lose no time in finding out what is wrong.

Personal Hygiene—Talk freely with your men about the different phases of personal hygiene. Do not leave all of this for your deans of men. Their territory is rather extensive, and some valuable opportunity to help your men might get by. Do not forget that there are many moot questions that the college player has not yet settled to his entire satisfaction. A coach of clean type can help many a man find himself. A respected coach's opinion goes a long ways with the young men under his training.

Lewdness or Profanity—Permit no member of your squad to indulge in lewdness or profanity of any type. A coach should never forget himself. No matter how rough a player may pretend to be, he wants to look up to his coach.

Team morale is in direct proportion to the self-respect and manliness of the coach and of his players. Clean, self-respecting men compose most of the school and college teams of the country nowadays.

Answer Questions—When the men learn to trust your judgments, you will be asked many questions which seem trivial and unnecessary. But nothing is unnecessary to men in the making. Treat their every inquiry with consideration. Some night they will show their appreciation to you, for these little intimacies, when they fight their hearts out to win.

Eating—Coaches should see to it that men in training do not eat highly indigestible foods. But, *how rapidly* the player eats is of more importance than *what* he eats.

Players who eat at fraternity houses and boarding clubs do not have opportunity to select special menus. But they can, to some extent, by omission, avoid things that would be harmful. Fortunately, however, the tabooed lists of foods of the old training table have largely disappeared. Plenty of good wholesome food is now the direction in general.

What to Eat—Oranges can be used indiscriminately. They are my hobby for all athletes: an orange in the morning one-half hour before breakfast; an orange apiece for the players as they leave the practice floor; and an orange before going to bed—three oranges a day, and more, if the player can get them. They are appetizing, stimulating and insure tiptop physical condition. Athletes often confuse thirst with hunger. The orange satisfies both and keeps the player from overeating.

Mineral Salts in Oranges Aid in Preventing Staleness—So important do I consider the use of oranges in team training that every encouragement is given the “pep” organizations of the school to furnish each member of the squad, when leaving the gymnasium, a large orange. School “pep” organizations, wide-awake and keenly interested, are more than anxious to do their bit. They delight in furnishing the oranges, and their co-operation fosters a healthy situation between team and school. The more they are permitted to do for the team, the more they will back the team. Through their sacrifices, they have helped to build it; through their co-operation, it becomes more truly theirs. They can help in no more material way than this; for it is my conviction that the mineral salts in the oranges, freely and regularly used, will do more to ward off staleness than any other single thing.

Correct Way to Eat an Orange—Cut the end out in conical shape. Use a heavy-backed spoon to scrape or break down the cells rather than to cut or pry the sections loose. When eaten in this way with the cells broken up, the juice of the orange covers the entire area of the taste bulbs of the tongue—thereby stimulating the gastric and the biliary flow. These juices aid digestion and eliminate constipation.

Boiled, Broiled, and Baked Foods—These should constitute diet fundamentals for the player who wants to make no mistake in his eating program. Explain to the men the relative values of the fats, proteins, and carbohydrates, as well as the tearing down process that is taking place in their bodies, so that they will understand why tissue-building foods should be eaten. Boiled, broiled, or baked meats form a good base for a training diet. Use no fried foods. If meat is eaten before the game, arrange the meal for three hours before game-time.

Milk, Eggs, Toast—Plenty of milk can be used every day except the day of a matched game. None should be used on that day, as it tends to make the mouth and throat very dry.

Many trainers object to the use of soft-boiled or poached eggs as a pre-game diet. This opinion is justified if the players belch sulphur during exercise.

Use toast to the exclusion of other breads. It requires much chewing and reaches the stomach in a state of predigestion.

Coffee, Cocoa, Sweets—Men should abstain from drinking coffee and tea regularly during practice seasons. The system should be so thoroughly freed from stimulants during playing season that coffee, when used to pull the men out of a hole, perhaps at the end of a long, fatiguing trip, will bring results. A system thoroughly

freed from the stimulating effects of coffee will respond to it quickly, but a man who has his coffee regularly fails to find in it the same degree of stimulation, in crises.

Chocolate or cocoa is splendid for players if enough apples or oranges are eaten to offset its constipating effects.

The old-fashioned trainer absolutely prohibited sweets for the players—possibly without understanding why. Now the general trend of training is toward discretion and not toward total abstinence. Candy eaten discriminately after meals does not injure the players' physical prowess. In fact, it, being an energy producer, has a definite place in the athlete's diet.

Water—An athlete should drink, on the average, a glass of water every hour except on match game days, when he should cut down to four glasses during the day. Plenty of water taken into the system stimulates the gastric flow and eliminates any tendency toward constipation. A player should drink as much water after practice and before retiring as is consistent with comfort.

Between Meals—Advise the nervous hungry type of athlete who never gets enough to eat and wants to eat between meals to drink a glass of water every time he wants to eat. It is difficult to analyze the condition of hunger. A glass of water at such times will appease it.

Each Bite of Food Should Be Masticated Fifty Times—Stress the thought of the mastication of food. Suggest that each player masticate or chew each bite of food fifty times before swallowing it. One is, by nature, always more interested in himself than in anyone else. Therefore, this little mastication-counting game practiced on one's self will be conducive to one's own welfare. The player in the act of masticating each bite of food will get an object lesson in his eating habits that he could not acquire by having someone constantly saying to him, "Slow down." This plan can be used as a favorable introduction to further hints at health control, and, consistently followed (even though in modified form) will avert much indigestion caused by rapid eating after the fatigue of hard practice.

A Pre-Game Menu—This meal should be eaten at least two and one-half hours before the game.

Menu — Sliced oranges, sprinkled with sugar.

Two slices hot dry toast and butter.

One-half baked potato.

One cup of weak tea, with sugar, no cream.

Sliced peaches, no cream.

If the team has been subjected to a hard trip, a small piece of broiled T-bone steak (two inches square) can be added to this menu.

A Diet for Staleness—Sleep, rest, a daily light workout in the gymnasium, followed by a tepid bath and a brisk alcohol rub, together with a suitable diet, will bring the worst case of staleness back to normalcy in a week or ten days.

Many coaches will not let a stale man come around the gymnasium for two weeks. I believe this is wrong. Keeping a stale man away from the gymnasium is like keeping an old fire-horse out of his stall. He will chafe under the restriction and begin to fear that something is radically wrong with him. Let him come around the gymnasium, get into a suit, and take easy workouts and baths for about ten days. He is accustomed to his daily shower and will miss it if he does not get it. It is also better for the team to have him come around the gymnasium. If he is a regular, as he undoubtedly will be, as "subs" seldom go stale, the team will miss him and wonder what is wrong. The psychology of the situation is this: When he is away the team morale is weakened. The mass (the team) feels more secure and more satisfied if its practice personnel remains intact, even if some do nothing but sit on the side lines.

Head lettuce, creamed onions, fresh spinach, butter, eggs, nuts, plenty of cereals with a short diet of meats can all be included in the coming-back diet of the stale man.

Orange Eggnog—An orange eggnog is a splendid tonic for a languid man with no appetite. *Recipe*: Squeeze the juice of an orange into a bowl. Beat the white and the yolk of the egg separately. Mix the orange juice with the beaten egg yolk and fold into the beaten white of the egg. Flavor with a pinch of salt and (if desired) a sprinkle of sugar. A slice of buttered toast eaten with this eggnog makes a delicate and nourishing diet for a stale athlete.

Contentment—Bear ever in mind the value of contentment. A contented mind never grows stale. Utilize all of the vocal and instrumental talent on your squad. Group singing is a fine thing to harmonize minds and to develop comradeship.

During the last meal just before a hard game, whether at home or away, it is splendid for the team to have music. The athlete does not derive much game strength from this last meal. His biggest benefit is in the contentment that it brings.

CHOOSING THE MEN

A real coach is a true democrat. He will not let family, fraternity nor personal favor enter into the choosing of his men. He will choose players of ability, who have a real desire to win a Varsity letter, rather than men who have been touted as high school stars and are cock-

sure of a place on the team, but who have only a vague idea of what a 100 per cent effort means.

A good big man is always better than a good little man. Aim to pick a rangy, shifty outfit. In the selection of guards, height and weight play a most important part. The rear guard must of necessity be a tall, powerful fellow with good foot work. This type of guard is absolutely necessary for rebound work. Taking the ball from the backboard is the work cut out for the rear guard. The floor guard need not have so much weight, but he must be an excellent dribbler, a good passer and a sure shot.

Many coaches sacrifice height for a good scoring floor center. This is all right, if the rest of the team is weak on goal shooting. However, if the other men are well up in scoring power, it is decidedly to the advantage of a team, both on offense and on defense, to use a rangy player at center.

The forwards do not seem to be so handicapped by being small as are players in other positions. Some of the best forwards I have ever seen in action have been little men. A small player is easier to guard under the basket than a rangy one; but when it is a question of covering floor area, the advantage lies with the speedy little man.

High-spirited fellows are the men you want. You can appeal to these chaps in critical moments, and they will invariably respond. Phlegmatic men never over-reach themselves. Few of this kind of men are needed on a team.

Select men, on the whole, who do not dissipate in or out of season. The player who observes training laws in season only and who "runs loose" out of season is lacking in some respects. There has been no transference of his athletic training. His team experiences have failed. Athletics viewed from this angle are an end in themselves and are not, as they should be, a means to an end.

CHAPTER II

Individual Offense

The ideal type of basket-ball player is the lithe, rangy fellow with an athletic swing. His body must be so schooled in stopping, starting, and reversing that there will be not one lost motion. He must be aggressive and courageous. He must be a hard, clean player, ever ready to follow the lead of his captain, as well as always able to think for himself.

No player should be given the option of executing a basket-ball fundamental in his own way. A coach who gives this option to a player makes a mistake. In practice, drill the player in one style of execution until he has mastered it. Then, if necessary, let him practice another style of execution for the same fundamental. After he has carried out to your satisfaction these instructions on specific technique, permit him, under observation, to choose the type of execution that is best adapted to his native style.

By earnest, consistent, gruelling practice, practice, practice in fundamental drills, any player of moderate ability has a fine chance to "come through." In fact, there has been many a man with practically no outward evidences of becoming a great player except the desire to be one, who has "arrived," because he was willing to stay with the job and to make the attendant sacrifices.

The offensive game as now played calls for men of strategy as well as for men of physical perfections. It needs players who can, in their offensive drive down the floor, lose themselves from the defense. By rushing swiftly down the court and suddenly coming to an abrupt stop, using a squatting back step, and then, by cutting off sharply at right angles, a player may literally, as well as figuratively, lose his guard. An ability to execute such fundamentals of basket-ball successfully determines the floor wise or finished player from the man who is still in the process of making. Men with such finish are integral parts of great machines.

ZONING THE BACKBOARDS FOR BASKET SHOOTING PRACTICE

It is a splendid idea in early shooting practices to work with diagrammed backboards upon which you have outlined shooting zones; this is to assist the players in locating the exact areas on the backboard from whence rebound work will be effective.

Diagram
1

Every basket-ball player has in his early experiences located certain spots on the backboard at which he could aim when shooting a carom shot, and from which he could score consistently. Out of such experiences has evolved the theory of zoning the backboards as an aid to the player in visualizing the "hot spots" in the scoring zones.

angle, the more delicate will be the english put upon the ball in releasing it, until, when almost in line with the edge of the backboard, the touch will be very delicately shaded.

Now add two 15-inch squares to each side of the 18-inch box, as shown in Diagram 1. All lanes and zones should be laid out exactly according to the dimensions worked out in this diagram. These two smaller boxes will aid the men when they are closer in to the basket in locating the "hot spots" on the backboard.

A board correctly diagrammed should have, at least, these five zones outlined upon it, or else the players will not get a complete drill in locating the proper spots for rebounds when using the underhand english and the push arch shots.

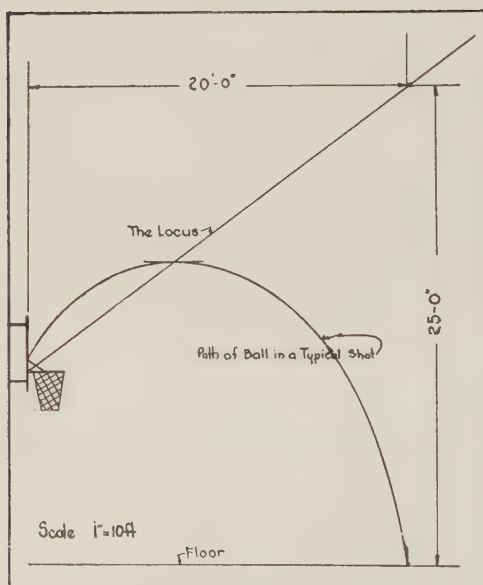
When we think of the success of basket shooting in terms of the delicate shadings of the wrist and finger movements required to make these shots accurate from every angle of the court, we can appreciate the wonderful art of this game.

METHOD FOR TEACHING CORRECT ARCH IN SHOOTING

Some coaches, in their efforts to help the men estimate the necessary height of the arch before the descent of the ball on its way to the backboard, fix an imaginary spot approximately twenty-five feet in the air and twenty feet out in front of the basket. The player, when shoot-

Diagram
2

DIAGRAM 2



Air paths for high arch shot.

ing, can imagine a line described by the course of a ball from this spot in the air to the basket. The ball which describes this imaginary line deflects into the basket on a carom shot.

This line should be the locus of the highest points of all arches used for rebound shots from any ordinary scoring distance directly in front of the basket. The ball in its arch after it leaves the player's hands describes a curve similar to a parabola, the highest point of which intersects the imaginary locus. The distance of the shooter from the basket determines the point of intersection of the crest of the parabola with the line. The closer-in the shots are made, the farther down on the imaginary line will be the points of intersection.

It is good pedagogy to teach the men to shoot for a direct looping hit into the basket. And this scheme of describing the imaginary line from a spot in the air is a means of stressing upon the players' minds the importance of shooting high. Most players shoot too low and too short. Should they overshoot, by correctly arching the shots, they will always have an extra chance for a goal on the rebound.

THE TIP-OFF

Much of the success of a game depends upon the tip-off. At the opening of the game, after every free throw, field goal, and held ball, the tip-off is used. Forwards, guards, and centers

should be able to execute this play perfectly.

When the referee throws the ball into the air at a height greater than either man can jump, he blows his whistle and puts the ball in play.

Exhibit
R-1

Jumper in Air—Exhibit R-1 shows a jumper in the air to meet the ball coming down. He has anticipated the rapidity of its descent and has estimated his ability to go up and tip it. He has met it with the cushions of his three middle fingers in order to push it off in the direction that the signal indicates. The fingers must meet the ball at the right spot or the ball cannot be placed where the jumper wants it.

Note the full extension of all parts of the jumper's body—shoulder, elbow, wrist and fingers, as well as the trunk and



Exhibit R-1
The tip-off. Jumper in air.

limbs. The arm is at the back, and there is no doubt as to the legality of this jump.

Jumper's Arm—By the rules of the game, the jumper's arm must be kept in contact with the small of the back until the ball has been tipped by one of the men jumping. Some coaches have their players hook their fingers in a loop of elastic attached to the trouser band. This is an evasion of the rules. On account of the "play" in the loop of elastic, the jumper might bring his arm around to interfere with his opponent. It is better to have the player hook one finger—the index finger—in the trouser band at the small of the back. This method gives great advantage to the jumper, as the use of this particular finger, and no other, allows greater rotation of the arm and shoulder in propelling the body upward. The index finger should be used in this instance in preference to any or all of the others, on account of the peculiar attachments of the muscle, the flexor corpi radialis (Spalteholz).† Nature endowed this digit only, with a private group of muscles. The other flexors of the forearm are attached conjointly to its fellows. The pronation of this index finger muscle shortens the fibres and thus frees all the other flexors of the arms and fingers—thereby giving more freedom to the body in the jump.

†Hand Atlas of Human Anatomy, Werner Spalteholz, Vol. II, Page 308.

Arching the Ball—On the tip-off, a player should tip the ball up and over. This gives the team mates an opportunity to time their thrust and to drive through with more accuracy. In this play, one should never try to slap the ball, as this causes a partial flexion of the forearm and wrist, and, thereby, a sacrifice of several inches of much needed reach. And, too, a player at tip-off in the act of slapping a ball might miss the ball, strike the opponent's arm, and cause a needless foul.

Playing the Ball—A player should watch the ball at all times. He must play the ball and never the jumper. Some players, when being outjumped, think it foxy to strike their opponent's wrist. Officials soon get on to this and will begin to watch the offender for stunts that he does not intentionally "pull."

"Outfoxing" an Opponent Who is Driving Too Close—If an opponent drives in too soon and closes the path where the tip was supposed to go, the other jumper can tip the ball two or three inches in the air, reverse his wrist, and tip it behind him for a safe recovery.

If an opponent is jumping across to the other half of the circle and using the chest block, the jumper can shift to another position in the circle and use a corkscrew jump. In this way, he can present the back-arm and shoulder to the

opponent's chest, and offset the advantage he is trying to gain by this illegal jump.

Alighting From Tip-off—A player must learn to alight from the tip-off with knees well bent, feet well spread and slapped smartly to the floor. After alighting, he can step one step backward from the center circle, ready to dart off in either direction. This keeps his opponent from blocking. In this retreating position, he should bring the feet reasonably close together, so that he will be prepared for any emergency. If two opponents should come in to block him, a quick start and then a reverse, followed by a slashing drive to the side lines, would draw his opponents after him and leave a hole into which a crafty team mate might swing.

SHOTS AND PASSES

THE FREE THROW OR UNDERHAND SHOT

100 Free Shots a Day—The free throw, both from the field and from the foul line, has been responsible for more victories than any other two shots combined. Since the rule covering free throws has been changed to give each offended player a free toss when fouled, it is up to every man on the team to become an adept at free throws. Each player should throw at least 100 free throw shots a day and keep a daily record of his tries.

**Exhibit
C-1**

Practice-Fundamentals—Exhibit C-1 shows the player balancing the ball. This form is



Exhibit C-1
Player balancing the ball.

used only in the practice of fundamentals, and not when approaching the free throw line in a game to make the throw. It should be used as the first step in teaching the execution of the free throw. The player is using his index fingers as an axis and is rotating the ball toward his body. The lace, being the heavier part of the ball, gravitates downward. The ball should be in this position (lace downward) when the free throw shot is made. Have the player, in this position, spin

the ball around many times to develop nimbleness and deftness of the fingers. In the actual execution of this shot, by developing and using the finer accessory groups of finger, forearm, and wrist muscles, instead of the heavier body axial groups (those of the humerus and the trunk), the player will get a more delicate coordination and will develop a more accurate shot.

**Exhibit
C-2**

First Step in Execution—Exhibit C-2 shows the player approaching the free throw line. He

is, as he should be, looking at the ball, rather than at the basket. This gives him an opportunity to relax. He balances the ball lightly in his fingers while his vision takes in the floor before him. The ball should never rest against the palms of the hands but lightly in the finger cushions—much the same as does a baseball when the baseball player is in the act of throwing. The position gives the “zip” to a baseball or the tonic snap to a basket-ball.

This player in Exhibit C-2 also shows the correct preparatory position of the fingers upon the ball, before the execution of the shot. By the proper pressure of the cushions of the middle, the ring, and the little fingers upon the ball, he gets the exact touch. Just how much “stuff” he desires to put upon the ball is determined by the lift directly upward that he gives it and by the pressure that he exerts in its release.

The left or front foot of the man getting ready to make the free

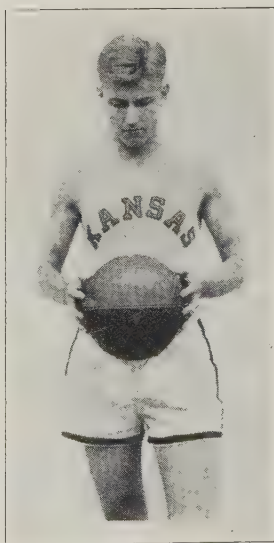


Exhibit C-2
*Player preparing for free
throw shot.*

throw should be placed about two inches back of the free throw line. He should place the foot so firmly into this position that it will be pushed more securely toward the toe of his shoe. With this assurance that the foot is back of the foul line at the time of the shot, the player will feel more confidence, and the pseudo-suggestion from some opponent to "watch his foot" will not affect his shot.

The rear foot should be brought forward to an easy walking position, usually with the toe at a right angle with the forward heel—or the rear foot about one-half step back of the forward foot. As a jumper measures his take-off, so should the free thrower carefully perfect his stance.

At this step in the execution of the shot, perfect relaxation of the entire body is necessary. During the game, exertion has overtaxed the player. Here is an opportunity to save up. If the player who will execute the shot is panting and his heart is beating like a trip-hammer, he should take a full deep breath and hold it for six or eight seconds. By this act, the pressure of the diaphragm will slow the heart down perceptibly.

Exhibit
C-3

Second Step in Execution—Exhibit C-3 shows the player coming down for the shot. Just before starting down, he catches a full deep breath. This sets the diaphragm and contracts

the other muscles of the thorax. Tonic contraction is very necessary now. The player

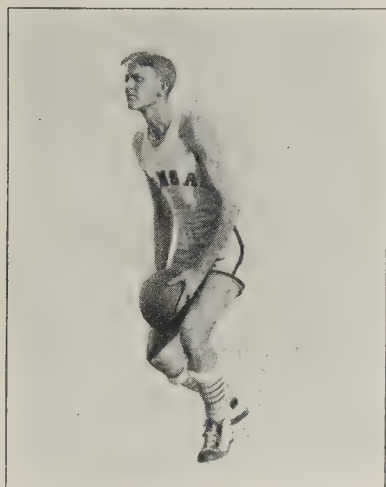


Exhibit C-3

Player coming down for the shot.

should hold his breath until after the shot has left his hands. In making the final adjustment of the ball for the shot, he should carefully feel the ball into its place among well-relaxed finger muscles. You will note that his arms swing naturally at the sides as he comes down for the shot. This position aids him

in maintaining his body balance while in the act of shooting; and is an argument in favor of using this shot for making free throws, instead of using the push arch or chest shove shot, which is likely, if the thrower leans too far forward, to upset the balance. In the free throw or underhand shot, the weight of the body rests upon the balls of the feet and remains steadfastly there as the shot progresses, while in the push arch shot the initial movement pulls the body forward. The arms extended high above

the head and coming down and forward at full extension in the execution of the push arch shot are very apt to upset the player's equilibrium.

In the underhand shot, the ball is dropped down from the waist-line until the back of the left hand rests lightly upon the front of the left thigh. As the ball is brought upward, the player must use a quick quarter-squat and rise high on the left foot with follow-through of the hands and arms. When rising in the air, the balance of weight must be carried fully on the ball of the forward foot.

Exhibit
C-4

Final Step in Free Throw Shot—Exhibit C-4 shows the final position of the body after the



Exhibit C-4
Final step.

ball has left the hands. With a well-poised body and a careful glance at the basket, the player "lays" the ball high in the air. He aims to drop it clear of the basket rim. The movement employed should be a slow, unfolding, leaning high-jump instead of a forward, slow broad-

jump. Should the player overshoot the basket, the reverse given the ball by the player's lift will "kill" it when it strikes the backboard and probably will pull it back into the basket.

The player in this movement has used full extension and carry-through. As the center of the basket is only 13 feet and 9 inches from the free throw line, this carry-through allows the ball to leave the player's hands much closer to the hoop than if he should use an underhand snap throw.

Confidence has much to do with a successful shot. The player in the act of making the shot, should shut everything out of his mental field except the confidence that he *can* make the shot good. He has made hundreds of successful tries before. Why not again? The first aim is best, and it needs only confidence to back it.

Underhand Shot Better for Free Throw— This underhand or loop arch shot that has been demonstrated is preferable to the push arch shot for free throws. It is a more natural scoring shot, for the reason that man uses his flexors much more than he does his extensors. The flexor groups of muscles are the ones employed in this shot; therefore it is an easy shot for most players to make.

Push Arch Better in Field of Play— But in the field of play, this underhand free throw shot is unsafe when an opponent is within ten feet of

the man who is to shoot. It is more easily blocked than the push arch or chest shove shot. However, this underhand free throw shot *can* be used advantageously when rising to shoot from a running dribble or after pivoting away from an opponent near the basket.

THE PUSH ARCH OR CHEST SHOVE SHOT

Exhibit
G-1

Player Shown in Execution of Third Step—
In Exhibit G-1, the player is shown in the third



movement of the push arch or chest shove shot. In his initial move, he took one step forward. Then, in the second movement, by thrusting the ball out in front much after the manner of a boxer's feint, he described a half circle downward, the half circle ending at the waistline. This circular movement of the ball was wholly for the purpose of relaxing the muscles used in making the shot.

In this third step, which is demonstrated in Exhibit G-1, the

Exhibit G-1
*Push arch shot. Player shown
in third step of execution.*

player has brought the ball upward along the abdomen and chest and will be ready to release it with a tonic snap when it reaches a height in front of and above his eyes. His fingers are distributing light but equal pressure upon the ball. His thumb serves as a bracket to keep the ball from falling out backward. It also enables the ball to rest lightly in the finger tips.

Tactile Sense—The tips of the fingers are the sensitive areas. In the present game of basket-ball, in which so much of the finer technique depends upon the quality of the touch, this field of tactile sense is woefully neglected.

If a blind person can read raised type by developing the tactile sense, one can readily see how, by training, a basket-ball sense can be developed in the player's finger tips.

Neither Hand Should Be Under the Ball—In this shot, neither hand should be under the ball, as this brings the heavier muscles into use and slows up the shot. In a shot-put, this position of the hand under the ball is necessary on account of the weight of the shot. It takes the heavier muscles of the arms to handle it. But the basket-ball is light and does not need heavy lifting. It needs only the use of the lighter accessory groups of muscles—these to give it accuracy and tonic snap.

Thrower Must Keep His Eyes on the Ball—You will note that the player while the ball is

in his hands has his eyes fixed upon the basket. He will not aim just to clear the rim, but will arch his shot a foot above it. After the ball leaves his hands he will keep his eyes glued upon it throughout its course. Failure to watch the ball after the shot leaves the hands is a common fault among players. Thus, they lose many a good chance at a rebound. No player, whether on offense or defense, should ever take his eyes off the ball for one instant.

Practicing This Shot—In teaching this shot to beginners, have the players make a full squat, with the foot position the same as in Exhibit G-1. They should not stand more than two feet from the basket. In this crouched position, have them loop the ball over the rim, endeavoring to get as high an arch upon it as possible. This act will demonstrate to the players the necessity of getting the ball high in the air. It will also develop splendid co-ordination.

**Exhibit
G-2**

Possibilities of Push Arch Shot—This shot, when handled in the proper way, makes numerous feints and easy pivots possible when a charging guard confronts the player. In Exhibit G-2 the guard has rushed the forward while still in the stance shown in Exhibit G-1. By throwing the weight on the rear foot, the offensive player has sprung upward and backward, shooting a high arch shot over the outstretched hand of the attacking guard.

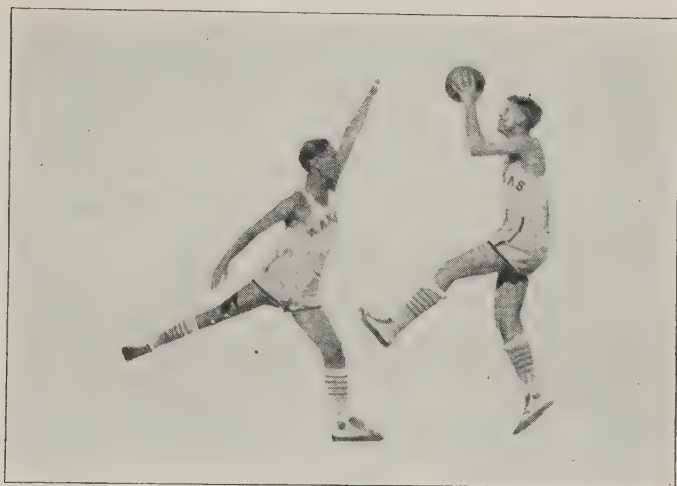


Exhibit G-2

Charging guard confronts player who is in the act of making a push arch shot.

Observe Leg Movements—Please observe the natural leg movements of the offensive player when shooting this push arch shot. The forward's left leg and foot are prohibiting the guard from leaping directly into him while shooting. This leg can be dropped downward, thus presenting the knee. This will keep the guard off a little longer and will give the forward more time to shoot before contact ensues. Some players obtain their balance better by this latter method of dropping the leg and presenting the knee.

Double Spring Jump—The forward executing this shot uses a double spring jump on the rear

leg. The first jump comes when he short-steps backward to avoid the guard; and the second, when he makes the spring in the execution of the push arch shot. These jumps follow each other in rapid succession. Notice in Exhibit G-2 that the guard is ready to leap off his front foot; but the forward, by shifting back on the pivot foot, has arched the shot over the guard's outstretched arm. This shot can be used when an opponent is nearly on top of the man with the ball.

Push Arch a Versatile Shot—A player that is proficient in this style of shot can make the defense charge-in to block, and, by a feint to shoot, can use a floor bounce, a pivot, or a hook pass as the occasion demands.

THE UNDERHAND LOOP SHOT IN SCRIMMAGE

Exhibit
G-3

Guard Blocks Underhand Loop Shot—In Exhibit G-3, with several feet in the clear, the player on offense is attempting an underhand loop shot; but the guard makes a quick lunge and projects his arm into the path of the ball. By using quick head and handwork, the forward retains possession of the ball; but in such an emergency he must quickly change his attack. The play previously shown in Exhibit G-2 could be used advantageously here. Due to the fact that the guard is between the forward and the basket, the one-hand english shot could not be

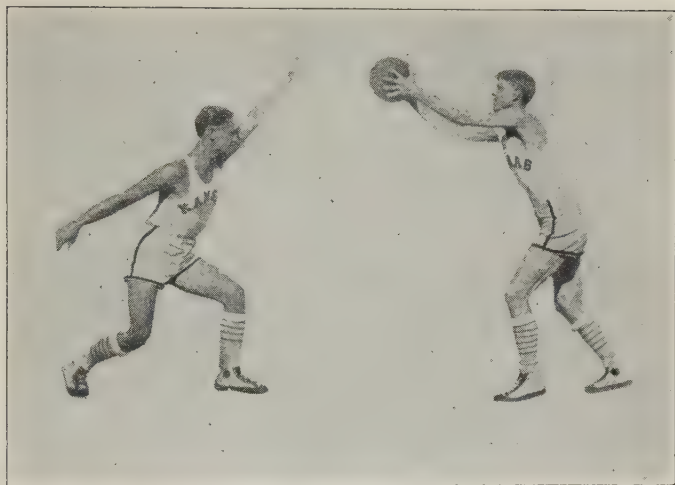


Exhibit G-3

Guard blocks underhand loop shot.

used. But if the forward did not think the push arch shot expedient, he could use either a pass or a pivot.

Forward's Team Mate Works Into the Play—In Exhibit G-4 the forward's team mate (not shown in picture), by cutting in behind the guard and getting near the basket, has enabled the forward to use the cross chest, shoulder bounce pass.

**Exhibit
G-4**

Guard Forces Passer's Hand—As the forward draws the ball across the chest to bounce the pass, the guard retracts his forefoot, which brings him to a crouch, ready for any defensive emergency. He may now block the floor bounce

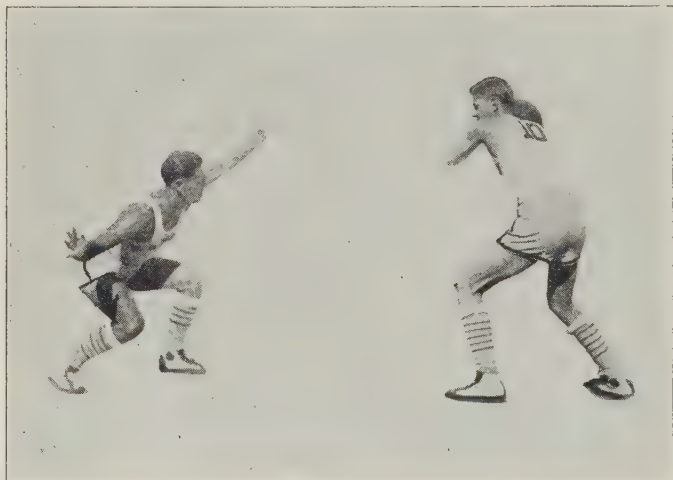


Exhibit G-4
Guard forces passer's hand.

by using his arms, or by kicking either foot laterally.

As soon as the forward's team mate behind the guard is taken care of by another defensive man, the guard can advance and force the passer's hand. In this case, the forward can do either of two things—pivot or hook pass. By dropping the forward shoulder slightly backward, he can easily effect a natural pivot. In the pivotal position, the head should be carried well back in order to maintain a more perfect balance.

THE ONE-HAND ENGLISH SHOT

The game of basket-ball has been likened to the game of billiards—the backboards being the cushions and the fingers of the players, the cue. When using a reverse or follow shot against the backboard, the same type of skill is employed by the deft and artful use of the fingers on the ball as is employed by the billiard player when using the cue successfully.

Use of One-hand English Shot—In the one-hand english shot, the ball is always played against the backboard. This shot, although one of the fundamental shots, is not used so much as the other two; namely, the underhand loop arch shot and the push arch shove shot. This english follow shot is used only when the other two are impractical.

Execution of Shot (First Step)—In Exhibit O-1, the player is demonstrating the proper execution of this shot. He is using his outside arm (the arm away from his opponent). The outside arm is always used to spin the ball, as this procedure throws the ball farther away from the defense and allows a full pronation of the hand and wrist.

Exhibit
O-1

Using Inside Hand to Adjust the Ball—The inside hand (the hand next to the opponent) has been used by the player to properly adjust the ball in the outside hand. When teaching this shot, I call the ball the “dry leather” and

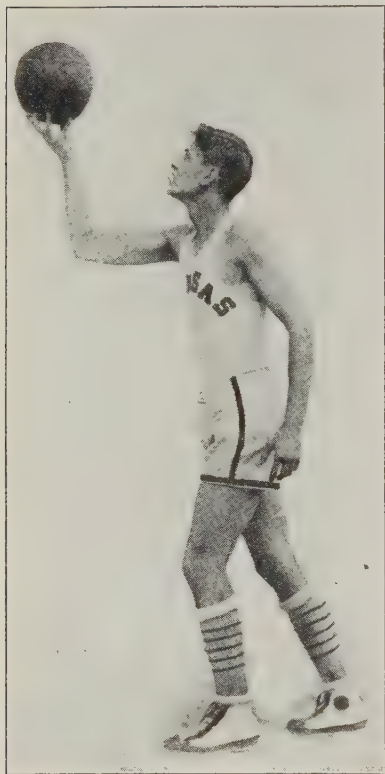


Exhibit O-1

*Execution of one-hand english shot
(First step).*

the cushions of the fingers against it, the "green leather." Moist leather against dry leather makes good contact. If the ball is pressed firmly against the finger cushions, it gets more contact surface and more english can be put on it. After the inside arm has performed this service for the shooting arm (the outside arm) the player can drop the inside arm down and away from the ball so that it may serve

as a legitimate barrier to an onrushing opponent.

Note that the player's hand is turned so that he is looking directly into the palm of his cupped digits. The ball is raised until the upper arm is horizontal. The cushions of the upturned fingers and thumb act as supports for the ball.

Notice that the little finger is brought around to full inversion. This helps to close the gap ordinarily existing between the thumb and the little finger.

The Shot—The player must relax the muscles of his hand as much as possible. He should then pronate his wrist, hand, and fingers with a quick tonic snap; and in the same act shade into full extension upward of the shoulder, arm, forearm, hand, and fingers. This movement puts the proper english on the ball. The shot in its final step is demonstrated by the player in Exhibit O-2.

Much of the success of this shot lies in a highly developed technical use of the fingers, wrist, and

Exhibit
O-2



Exhibit O-2

The one-hand English shot (final step).

arm. It should be practiced with either hand. It will not take long to learn the scoring zones on the backboard, if lanes are diagrammed (see Diagram 1) to indicate where a ball with the proper english will score.

This shot naturally follows a hook or a bounce pass under or near the basket. By turning on the left foot, the player in Exhibit O-2 could present his hips and left shoulder to a guard, who might be almost on top of him, and, simultaneously, could execute this shot to the right with such speed that it would be practically impossible to block.

THE ONE-ARM OVER-SHOULDER HOOK PASS

Exhibit
J-1

First Movement—The passer in Exhibit J-1, except that he is facing in the opposite direction, is in a position identical with the passer who is demonstrating the initial step of the one-arm underhand pass in Exhibit A-1. While the initial stances in the execution of these two passes are identical, this one-arm over-shoulder hook pass is much more difficult to execute correctly and is also, on account of the presentation of the passer's hip and thigh to his opponent, much the more difficult to block. Another strong point in favor of its use is that the guard in an attempt to block it will be drawn out of his position. The greatest difficulty in executing this pass is in directing it accurately. This is



Exhibit J-1

One-arm over-shoulder hook pass (first step).

due to the fact that (on account of the required pivot and pass while in the act of turning) the player has no base from which to execute the pass.

Guard Rushes the Passer—Observe in this exhibit that a guard is rushing the passer, who has advanced his left foot to the side-front and has presented his hip and thigh to the guard. The passer is watching for an opening to pass to a team mate and is simultaneously timing the rush of the guard. He can still pivot to the right if he decides not to use the hook pass.

Pass Completed—In Exhibit J-2, the forward has just completed a correct execution of this hook pass. In executing the pass, he rolled

**Exhibit
J-2**

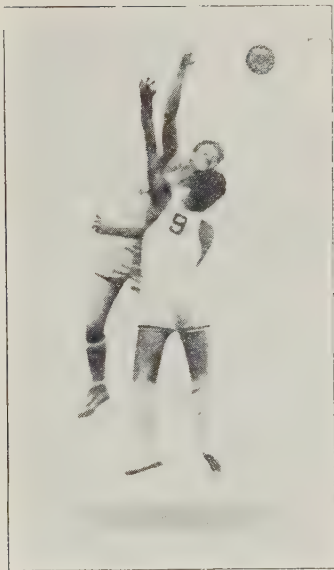


Exhibit J-2
Pass completed.

the ball back on his right hand against the wrist. At the same time, he turned on the toes of his left foot, high-jumped into the air, and hooked the pass high over his own left shoulder. Practically the full weight of the forward's body was thrown on his left foot as he jumped into the air. The passing arm was kept straight with the fingers cupped and spread over the top of the ball. The other

arm, by the very nature of the play, was brought around in front of the body, blocking off the guard. In this pass the arm should act as a flail. The shoulder should rotate in the socket. The ball should be a high floater, clearing the jumping guard's hand by more than a foot.

**Exhibit
J-3**

Passer and Guard Alighting—Exhibit J-3 shows the forward and guard both alighting from this hook pass play. In this pass, the right arm, having been crossed over the left shoulder when the passer jumped off the left foot, the passer has turned his body around to



Exhibit J-3

Passer and guard alighting after pass is completed.

face his team mate to whom he is passing. A left-handed passer will use the reverse order in making this pass. The passer in J-3 has hooked the ball high over the head of his opponent. This act throws the passer in a favorable alighting position. He will come down while the guard has gone up to try to block the ball. When he hits the floor, the pass will be well on its way. In such a play, the guard will always be at a disadvantage, as his back will be to the ball while the passer will be facing it. Upon alighting, the guard will try to block the passer's progress. He has probably been told, "If you cannot get the ball, get the man."

Guard's Use of Right Arm Legitimate—In J-3, the guard is using his right arm, extended to

the side, as an aid to his equilibrium and also to serve as a barrier for the forward when he alights. The guard is entitled to this position, and the passer, when he alights, will have to shift out and around the guard's outstretched arm.



Exhibit J-4

Showing passer's correct alighting position.

Exhibit
J-4

Passer's Alighting Position—Exhibit J-4 shows the passer's alighting position. Note the position of his hands on his knees. He alights ready to push off in either direction. By watching the guard's eyes, he can determine which way to shift. A firm, quick, downward pressure of the hands upon the knees gives the proper shift to a passer when he wants to get away from a blocking guard.

If the guard should rush him to make bodily contact, a snappy reverse with a quick dart away will force the guard to hold or body-check, either of which is illegal, and the offended man will get a free throw.

After the hook passer has succeeded in getting the ball to a team mate he should follow in and become the trailer for the man who has just received the ball.

Hook Pass a Good Basket Try—This style of hook pass, when the passer is under or near the goal, can be used artfully for a basket try. He can actually *lay* the ball up against the back-board.

THE ONE-ARM UNDERHAND PASS

One of the first things to learn on the offensive is that the man with the ball must pass to a member of his team who is in an open or unguarded position—the passer then moving automatically to an unguarded spot.

There is a marked tendency on the part of the average passer to loaf after making the pass. He should always follow his advantage by moving to a strategic position. Even though the pass does not come back to him in a more advanced position, he has drawn the defense in his direction and has thus made it easier for his team mates to rush to uncovered spots. In this way, the passer can aid his team's drive down the floor.

**Exhibit
A-1**

Initial Step—In Exhibit A-1, the player is in the initial step of a one-arm underhand pass—

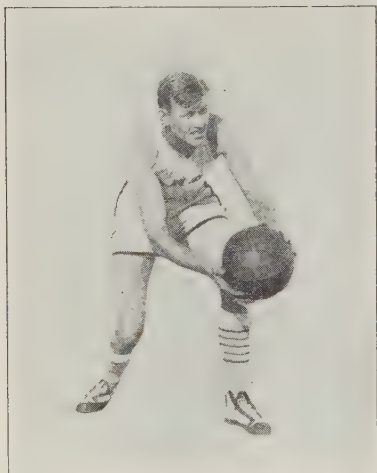


Exhibit A-1
One-arm underhand pass (initial step).

a stance identical with that of the initial step of the hook passer in Exhibit G-1. He has caught the ball in both hands and has then come to the crouched half-squat position that you see in the exhibit. He is preparing to roll the ball back on his wrist for the pass. His left leg is advanced one regular step with the toe straight

ahead. The weight of his body is resting equally on both feet. This puts him in position to pivot either way on the rear foot. When a pass forward is made, he will shift his weight to the forefoot.

Arm Position Versatile—Notice the arm position in this exhibit. The arms are extended beyond and to the inside of the front knee. This is a versatile position. The player in this position, instead of finishing the execu-

tion of the one-arm underhand pass, could do any one of many things. He could, by shifting his forward foot, very easily make an across the chest shoulder bounce or pass to a team mate. He could make a hook pass over his left shoulder. By drawing the ball back to his abdomen and then forcibly snapping it forward, he could use a floor bounce or a direct push pass. Or, by executing with his left arm, he could use a one-hand underarm pass.

Second Movement, a Lower Crouch—Or, as shown in Exhibit A-2, he can continue with the one-arm underhand pass. In this exhibit he has drawn his arms back and has rolled the ball on the rear hand against the wrist. He has placed the ball with the forward hand. His crouch is now lower than in Exhibit A-1. His present crouch is much like that of a bowler ready to deliver the ball down the alley. His rear knee is carried well forward by the swing of his body.

Exhibit
A-2



Exhibit A-2

A lower crouch (second movement).

Knee Position Protects the Pass—This knee position splendidly protects the pass when the ball, less than a foot from the floor, skims by the legs of the passer. Should an opponent present himself in front of a passer in this position, the passer, by shifting his front leg across to the right and thus presenting his hip to the defense, could convert the play into a hook pass over the left shoulder.

Alternatives—If the defensive man is too close-in for the forward to make a successful hook pass, he could, by pivoting on the rear foot, turn the play into a pivot to the rear and present his retreating back to the defense. He could then easily execute a two-arm underhand pass. Or, if the defense were not in his way, he could, in his reversed position, use his left arm instead of his right for a one-arm underhand pass. The pivot presents many possibilities to a versatile player. The only hazard a pivoter takes is, by drawing the rear or pivot foot out of position, the risk of getting a penalty.

Exhibit
A-3

The Follow-Through—In Exhibit A-3, the player demonstrates the follow-through of the one-arm underhand pass. This pass is good from 15 to 40 feet, and is, in my opinion, the most accurate pass of any used on offense. Note that the player has now straightened up from the squat maintained in the passing position and is in a charging pose. The shoulder

swing of the pass carries the player forward into the next play. With his right foot advanced one full step, he starts on the run for the follow play. Should a defensive opponent suddenly present himself in the path of this pass, the passer could recover before the release.



Exhibit A-3
The follow-through.

THE ONE-HAND UNDERARM PASS

A Time Saver—This pass is a convenient time saver and works well in pinches. It is a quick snap pass and can be used advantageously in positions where a half second's delay or a move for a better pass would mean the tightening of the defense and the loss of an opportunity to score. This is the pass to use when the passer has his back to the basket and is crowded by the defense, but has an uncovered team mate, within ten or twelve feet, who is in a scoring position.

Player Has Completed One-hand Underarm Pass—The player in Exhibit A-4 has just executed this one-hand underarm pass. In the execution of the pass, he held the ball to the front

Exhibit
A-4



Exhibit A-4

The one-hand underarm pass. A time-saver.

with both hands much the same as was done in Exhibit A-1. The other man in this exhibit is the passer's team mate who is to receive the pass. When the team mate calls for the ball, the passer raises his left hand and cuts the ball on an underarm snap to his team mate who is in position to score. In this play, the passer's eyes should be on the man to whom he is directing the pass and not on the ball.

Note the position of the receiver's hands. As soon as the ball falls into his relaxed fingers, he uses a still further relaxation of the hands and wrists, downward. This act puts him in position for a shot or a dribble.

Other Plays Possible—The passer making the one-hand underarm pass could easily use a floor bounce from this same position, but he seldom does, as the more direct route is not by way of the floor. This pass is standard and not like the old chestnut play of flipping the ball around behind your back and taking a chance on where it would land.

RECOVERING A HELD BALL

Officials on Held Balls—When two players come to a clinch with a held ball, it is generally the more clever of the two that obtains possession of the ball. There are many ways to extricate a ball thus held. No player should be satisfied merely to hold his own with his opponent until the referee blows his whistle. Instead, he should use all of the cunning at his command to extricate the ball from an opponent's grasp before the referee declares the play a "held ball." Some officials, if the play is spontaneous, permit two opponents to test their mettle in this play. Others believe that they do away with the "backwash" of the game by calling a held ball immediately after the two opponents place their hands upon it. It never costs anything to play "heads up" on all occasions. A player should be ready for every emergency and play for every break. He makes his own luck.



Exhibit E-1

Players striving for possession of the ball.

Exhibit
E-1

Striving for Possession of the Ball—It is not necessary to hold the ball in the hands. There is no rule against using the arms in hugging the ball; but on account of the more deft muscles being in the fingers and hands, it is a good idea to use the hands.

In Exhibit E-1, the players are striving for possession of the ball. They have a perfectly natural stance, feet spread and left legs well advanced. Note the position of the players' hands upon the ball. The forward, with his hands at the sides of the ball, has it in a shooting position. The guard has not charged the opponent back; therefore, there is no bodily contact. The forward, in his effort to retain the ball, will draw the guard close enough to

him for the guard to work the following play. The guard, in trying to obtain possession of the ball, has placed his left hand on top of it to aid him in his shoulder drive; and has placed his right one on the lower surface of the ball to give it a quick rotary jerk upward. By giving the ball a snappy reverse, which is immediately succeeded by a forward lunge downward in which he pushes his left shoulder against the opponent's chest, the guard forces the ball downward almost against the opponent's left leg. Such a drive literally pries the ball out of the opponent's hands.

Guard Blocks Forward's Vision and Executes Final Twist—Exhibit E-2 shows that the guard has beaten the forward to this downward drive,

Exhibit
E-2



Exhibit E-2
Forward loses sight of the ball.

and, by this lunge downward, has completely blocked the forward's vision from the ball.

The guard then quickly swings the ball around to the right, breaks the forward's hold and throws him away from the play. In this final twist of the scrimmage, the extricating pry on the ball is not made by the hands and arms but by the shoulders, legs and hips. As the guard pivots away with the ball, his hips rotate against the forward and aid further in the block. In this rotary body swing, the hands of the player now in possession of the ball (former guard) are used merely as conveyors of the ball. Pushing off on his left foot, with his shoulder and hips still blocking the helpless forward, the guard completes a right quarter-pivot, steps off to the right with the left foot, and is free. His rear or pivotal foot remains in position.

**Exhibit
E-3**

Pivoter Protects the Ball—In Exhibit E-3, you will note that the pivoter's left leg is well advanced. This leg, together with the hips thrown backward and the arms at full extension forward, blocks off and keeps the attacking man from regaining possession of the ball. Now, the only opportunity that the former offensive player would have to get a held ball would be to dive for it. This he will hardly do, as it would be easy for the pivoter to rotate farther to the right on his pivot foot, and thus take the ball still farther away from



Exhibit E-3

Forward pries guard loose and protects the ball.

the attacking man. Too, the attacking player might lose his balance and fall, and thereby put himself completely out of the play.

Man on Defense in Awkward Stance—The apparently awkward position of the man now thrown on defense, as shown in Exhibit E-3, is caused by his continued desire to again get possession of the ball. However, if the play is executed as demonstrated, the more determined the man now on defense is to regain the ball, the poorer will be his position on the floor at the end of the play.

Pivoter in Good Stance for Hook Pass—The pivoter who is now in possession of the ball has his hands and feet in splendid position for a right-hand hook pass over the left shoulder.



Exhibit E-4

Pivoter in good dribbling position.

**Exhibit
E-4**

Pivoter in Position for a Dribble—Or, as demonstrated in Exhibit E-4, the pivoter is in perfect position for a dribble. By pivoting to his right, he could easily dart down the floor, clear of the attacking man who is now behind him. If confronted by a smashing defense while in this low crouching position, he could quickly change direction. However, he must smash off from the defense at an angle that will throw him as deep as possible into his own scoring territory. If all progress forward should be stopped, a pivot and a back pass to a trailer would be the order. The trailer might then employ the same method of advance until he would be deep enough in his scoring territory to shoot or to pass.

Three Seconds to Recover a Held Ball—The time consumed in these four steps demonstrating the recovery of a held ball should be not more than three seconds. The execution of this play should be so lightning-like that officials who are, as a rule, quick to call held balls would let it go by as a regular play.

FUNDAMENTAL DRIBBLING

Perhaps the most discussed play in basketball is the dribble. Many coaches do not use it. They contend that it is practically useless as a play—first, because the hazard taken with the ball is too great; second, because four men remain idle while one man plays the ball.

Other coaches maintain that, if the dribbler is proficient in stopping, starting and handling the ball, and is unselfish in his attitude toward the game, the dribble presents more opportunities than any other play in basketball. But a dribbler who cannot recover the ball when an opponent drives for it, is worse than no dribbler at all.

Dribbling Low—Some coaches maintain that the upright position is the better one for the dribble, as it enables the player to see the field more clearly. I agree with other coaches who believe that a player in the act of dribbling can control both the ball and his own body better when he is dribbling low. The crouched position—the accepted form in starting the sprints

—should be the correct form for starting the dribble.

**Exhibit
M-1**

Dribble Practice—This crouched position, ordinarily so difficult to teach beginners, has been handled very successfully in the method demonstrated by the “M” series of exhibits.

Line up 24 men on each side of the court and work by squads of 8. At the commands of “On your mark,” “Get set,” “Go!” start each squad separately. As shown by the dribbler in Exhibit M-1, each man at the start should keep the ball on the floor in front of him, while he himself maintains the same body position as does a sprinter at the start. A successful dribbler



Exhibit M-1

Dribbler ready for first step in fundamental dribbling (practice form). “On your mark.”

should get under way quickly. He should, during all the vicissitudes of his dribble, be able to protect the ball, or, if necessary, to recover it instantly. Instruct these apprentices in dribble practice to take short, quick, shifty steps, keeping the feet well under the body. This foot position will provide for a sudden shift in any direction.

Direct the men to dribble so low that the ball on the bounce does not rise more than ten to twelve inches from the floor. Have them keep their knees well bent, hips down, and the head and neck drawn in well between the shoulders.

Player Demonstrates Correct Dribbling Form
—The player, in Exhibit M-2, is demonstrating

**Exhibit
M-2**



Exhibit M-2
*Player demonstrating second step in dribble (practice form).
"Get set," "Go."*

the "Get set" step of the dribble in correct form. He will soon learn to approximate the proper distance of each drive to the front. If he is dribbling too close to his feet, the ball will strike his knees; if too far out in front of him, he will lose control of the ball.

Dribbler Must Push the Ball With the Cushions of His Fingers—At first, permit the dribbler to use the hand that is easier for him. Then have him alternate. See that the ball is kept well out in front and that the dribble is maintained by pushing the ball downward with the cushions of the hands and fingers each time as it arises from the floor. The muscles of the forearm and hand must be kept relaxed during the rest periods between each dribble.

Pivots, Stops, Starts, Turns—The technique of starting and stopping should receive careful attention. Much practice time should be spent in the mastery of the art of these steps. A successful change of pace is vital. Shadow dodging and stopping is good practice in shifty footwork.

First Lessons in Stops, Starts and Pivots—These lessons in stopping, starting and pivoting can also be learned early in one's experiences by chasing playful dogs. The dog will feint in one direction to draw his adversary's body off-balance; then quickly shift the weight of his

body in the opposite direction and bound away. The boy, in his efforts to evade the animal, learns to emulate his shifts. The dog depends upon these instinctive reactions for his food and existence, and he makes few mistakes. Many a finished basket-ball player has had his first lessons in stops, starts, pivots and turns in this way.

An Athlete Will Continue in His Initial Drive—As a rule, an athlete, regardless of his feints and shifts, will continue in the direction of his greatest body impetus, which will be in the direction of his initial drive. His feints are but momentary shifts, intended to throw his opponent off-stride and to give himself a change of pace. Such feints and shifts do not materially affect his body impetus.

Pivoting—When pivoting, the head, and the shoulder located on the same side as the pivot foot, should be brought back and down. Then the weight of the body will naturally give in that direction. The extended foot and leg should swing around circularly to any turn that is necessary to evade an onrushing man. The pivoter should carry the ball directly out in front of his leg and very low—almost to the floor. This crouched position protects the ball from recovery by an opponent. It also protects the player from shock and gives him an opportunity to scan the court for team mates.



Exhibit M-3

Player demonstrating correct stop at end of dribble.

**Exhibit
M-3**

Stop at End of Dribble—The stop at the end of the dribble is demonstrated in Exhibit M-3. The foot is clapped down forcibly, with the toes pointing straight to the front and the shoe hugging the floor. The arms and hands are extended full to the front with the ball clearing the floor from four to six inches.

Dribbler Safe in His Position—If a guard should charge in from the front toward the halting dribbler, he (the dribbler) could straighten his front leg and thigh and pivot away—thus presenting his hips to his opponent. If the guard should continue in his advance and make contact with the buttocks of the dribbler, the dribbler could, by quickly shifting the weight

of his body backward, offset the impact of the guard's charge and pivot on around in another direction and possibly try an underhand or a hook pass from his new position.

Improper Stopping—In Exhibit M-4, the player is making an improper stop after a finished dribble. He has his foot turned to the side, causing the force of the stop to be directed against the ankle. Sometimes the weight of the body will cause the ankle to roll and a sprain will result.

Player Easily Charged Off-Position—A player in this position is easily charged “off-balance” by his opponent, and the ball is more

Exhibit
M-4

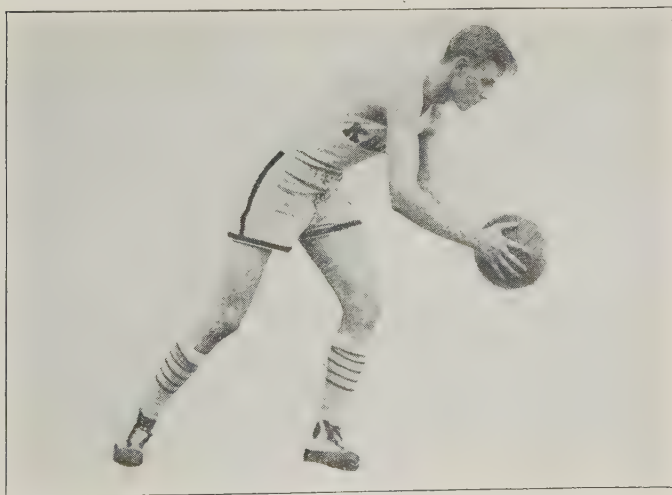


Exhibit M-4

Player demonstrating incorrect stop at end of dribble.

accessible for an underhand cut by the guard. A player must learn to stop, both on offense and on defense. Even though he may be able to properly judge his stopping distances, unless he has been properly coached in his foot-positions, trouble is in store for him. The big idea in stopping should be to get the maximum adhesive qualities out of the footwear and at the same time to protect the feet and ankles from undue strain and injury.

Further Dribble Practice—Good practice in handling the ball and the body while dribbling can be had in the following way: Put a guard out in front of the dribbler with instructions not to charge in. This plan is to teach the dribbler to judge distances without being attacked. Later, let the guard advance and attempt to get possession of the ball. This will force the dribbler off at an angle—either on a pivot or on a shift to the right or left—but always toward the side lines, for the reason that the guard is playing between the goal and his opponent. By pivoting toward the side line, the pivoter is in unguarded territory. The guard does not dare to get over there to block, for if he did he would leave the goal unguarded. Continuous and persistent practice in dribbling fundamentals is the only road to success; but when once arrived, the dribbler can win games and fascinate audiences by the perfection of his art.

THE DRIBBLE IN PLAY

Passing the Guard With a Dribble—The dribble, the pivot, the side step, and the dodge have revolutionized the game of basket-ball. Before the pivot was permitted, the player could advance the ball only by passing it or by batting it forward. Now, the game is not unlike checkers. But instead of jumping over the man, as in checkers, a successful basket-ball strategist legitimately draws the guard out of position, then pivots and legitimately blocks him off.

Exhibit
N-1

The Dribbler Under Way—In Exhibit N-1, with the ball well out in front and the body under control, the dribbler is under way. In this crouched dribbling position, the player must



Exhibit N-1

The dribbler under way with the defense obstructing his path.

not only watch the ball but must survey everything in his visual field, both to the front and to the sides, for a distance of fifteen or twenty feet.

Dribbler Plans to Pass on Left—The dribbler is planning to pass on the guard's left. He is dribbling with his right hand. When within a distance of about twelve feet from the guard, he starts a sharp dribble toward him, then splits off to the guard's right. This draws the guard over, for he knows that he must follow the ball. The dribbler also knows that he has the power to exchange shocks with the guard if necessary. But he intends, if possible, to cross-up his opponent by the strategy of a feint to the guard's right on his ultimate drive to the guard's left rather than to smash into physical contact. Whatever the hazard, he means to keep the ball.

A dribbler who plans such a situation intends to change his pace, for, by taking short choppy strokes at the ball and by progressing with quick shifting half-steps, he will confuse the guard as to the speed he is making.

Exhibit
N-2

Dribbler Passes on Guard's Left—As shown in Exhibit N-2, when the guard's weight shifts to the right, the dribbler changes his pace and comes across with his left hand on a right-angle smash and drives the ball with lightning-like speed to the left—the weak side of the



Exhibit N-2

Dribbler passes on guard's left.

guard and out of his path of approach. At this point, the dribbler throws his body in behind the ball so that he can continue dribbling with his right hand. His left arm remains in its extended position to protect the dribble from the advancing guard. Now, changing his pace and quickly swinging into a long low stride, he can accelerate his drive and bring the ball to his objective sooner than the defense has anticipated.

Guard Recovers From Off-balance—By this time, the guard has partially recovered from his off-balance position and lunges backward, endeavoring to block the path of the dribbler. It is now up to the dribbler to sidestep the guard. By a quick short step forward with the right foot, followed by a long driving tackle swing (across the front and away from the guard)

with the left foot, he can accomplish this. By this quick shift, he will suddenly present his shoulder, hip and thigh to the guard.

Exhibit
N-3

Guard Again Charging the Ball—From the position in Exhibit N-1, where the dribbler is using his right hand, to the position in N-3, where the dribbler again takes up his work with his right hand, the ball should have progressed about four feet.

At this juncture, the guard has regained his balance and is charging the ball. The dribbler, by directing his dribble into a right circular swing, has an excellent chance to drive around the guard. He is still using his extended left arm on blocking duty to protect the ball. By extending this arm, he has also projected his shoulder as an additional barrier to the guard



Exhibit N-3

Dribbler in right circular swing tries to go around the guard.

who is trying to block the dribbling arm. The forward's arm is not, and should not, push the guard away from the play.

When the guard rushes in to break up the dribble, he is almost sure to make bodily contact unless the dribbler by a final circular lunge throws himself around and beyond the guard for a spurt, deeper into offensive territory. There is splendid opportunity in this play for a pivot and a back pass to a trailer.

Exhibit
N-4

Dribbler Plays for a Back Pass to Trailer— In Exhibit N-4, the dribbler is trying to circle out and around the guard's left side. The trailer, who should be used in all dribble plays, follows about ten feet behind. The trailer's chief functions are to receive reverse pivot passes from the dribbler, and to recover fumbles



Exhibit N-4

Dribbler plays for a back pass to trailer.

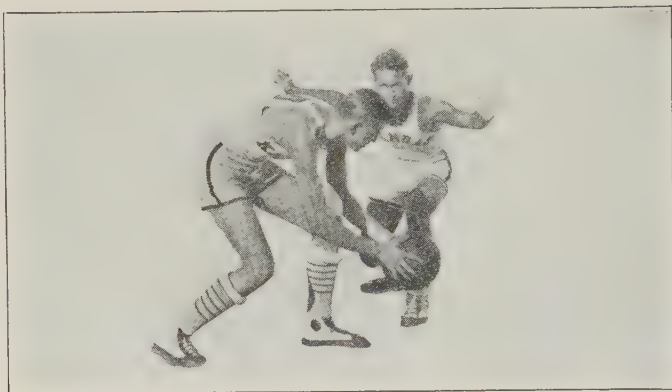


Exhibit N-5

Dribbler trying to force his drive past the guard.

when a charging guard upsets the dribbler's calculations. The trailer is always cautious in his advance and diligently watches for his breaks to come. The dribbler in Exhibit N-4, by swinging out and around the guard, draws the guard out of position.

**Exhibit
N-5**

Dribbler Continues to Force Drive—In Exhibit N-5, which is a continuation of this play, the dribbler continues to force his drive to the guard's left and has intended to circle around him, but the guard shifts over to run the dribbler to the side line and upsets the dribbler's previous plan.

Dribbler Forced to Pivot—The dribbler, after driving as deep into his own scoring territory as possible, is forced to pivot. Note the footwork of the dribbler in this exhibit. He ad-

vances his left leg and thigh to the guard as he recovers the ball. In his effort to get possession of the ball, the guard works into the dribbler's scheme. The dribbler, when forced to pivot, attempts to pull the guard around after the ball; and the guard follows as the dribbler has planned.

Ball Looks Exposed—The ball looks much exposed in this exhibit, but it is not; for, as the guard reaches out to bat the ball, the dribbler in pivoting gives the ball a long, low swing to the right and brings his left leg around to follow it as a protection.

Guard Blocked Off—Now, as shown in Exhibit N-6, the advancing guard, having followed the ball around in its pivotal swing, is completely blocked off; and the pivoter is ready to

Exhibit
N-6



Exhibit N-6

Pivoting dribbler succeeds in blocking guard off.

pass backward to his advancing trailer who sees the direction that he should take to avoid the defense. In this case, the trailer should go to the pivoter's right, as it is obvious that the guard is on the outside.

Observe the low crouch of the trailer. Just as a half-back in football runs low to split through the line with a driving attack, so should the trailer in basket-ball drive through.

Exhibit
N-7

Pivoter Pulls Away From Guard—In Exhibit N-6, note again the position of the pivoter's left leg. Compare this position with the succeeding step of the same player in Exhibit N-7. The pivoter, by moving his left leg forward one quick step, has pulled himself away from the guard, and thus makes the back pass to the trailer more secure.



Exhibit N-7
Pivoter pulls away from guard.

Pivoter Passes to Trailer—The passer's arms are at full extension; his hips are thrown back, and his trunk stretched—all of which removes the ball farther from the guard's reach. The passer lobs the ball on a two-hand underhand pass to the fast charging trailer. The guard, awakening to the new situation, makes a quick attempt to shift back and cut off the trailer.

The guard has been drawn away from the direction of his own basket, but may by some rapid footwork still succeed in protecting his territory. This angle of defense will be discussed in the next chapter.

Running Interference—As shown in Exhibit N-8, the chances are against the guard getting back into the play as the pivoter has completed his rotation to the right and is driving low and

**Exhibit
N-8**



Exhibit N-8

Pivoter aids new dribbler by running interference.

hard in the same direction as the former trailer (now the dribbler) is going. With perfect interference, the dribbler can now drive deep into scoring territory. The man running the interference makes no personal contact; therefore, his act is legal.

Guard Using Thigh and Leg to Stop Revolving Interference—Note, in Exhibit N-8, that, although the guard is using his leg and thigh in an effort to stop the revolving interference, he is likely not to have much success, as the trunk of the player on offense is in a good driving position.

Two Men to One—However, if the pressure of the guard becomes too severe, the pivoter can reverse to his own left—thereby letting the guard smash directly at the ball. The dribbler, after this pivot, can by using a hook across the shoulder pass, practically *lay* the ball into the hands of his team mate. This play should be worked so that there are always two men to one. This handicap is too much for the best of guards.

There is no set blocking in this play. The guard merely gets into a pocket trying to recover the ball. By the use of a backward pivot and a back pass, combined with a low, smashing and driving dribble, the offense can smash to uncovered sectors. By driving hard at these angles, the offense can push deep into the enemy's territory.

CHAPTER III

Individual Defense

THE THEORY OF GUARDING

The guard is the watchdog of the basket. His chief business is to keep his enemy from making goals; but he should also, when thrown on the offensive, be able to go down the court on a dribble or to score on a long shot with the same success as do the forwards and the center. There have been many splendid guards who have been very low in their scoring average; but there have been many better guards whose scoring average has been high. The fact that a guard can score should not (as some guards who are weak on offense console themselves by thinking) in any way lessen his defensive strength. A winning team needs five good guards and five good forwards—the ten embodied in a team of five. The more threats a man has, the more he is to be feared.

At least one of your guards should be a big rangy fellow with an aptness for taking the ball off the backboard on the rebound and getting it to the team mate who is in the most strategic position to advance it toward the goal. A guard must think quickly enough to determine in the fractional part of a second whether to pass, pivot, dribble, or reverse. He has the field before him and can well choose an opportune thrust. He must also be able to dash into the

offensive territory instantly for either a pass or a shot; but cautious always not to go so deep in on the offensive that he will leave his goal undefended. A wary guard will not sacrifice two points of his team's score by getting out too far. He will realize, that by holding all opponents to low scores, his team will reap the benefit of the psychic effect that this fact will have upon the opposition. The word will go out that his team has an air-tight defense, which thought continued and prolonged from game to game, will put the opponent in an uneasy frame of mind. Such uneasiness on the part of the opponent will be conducive to defeat.

A wily guard will never let the opposition slip in behind him. He will see that neither of the offensive forwards locates in the corner for a pot shot at the basket. He will meet a versatile dribbler, who has succeeded in getting past the forwards and center, out in front of the basket. In short, a skillful guard will be the general of his team when on defense, continuously advising his men, who cannot on account of their floor positions always scan the court, just when to advance or to retreat as new situations arise.

Finally, a real guard will play the ball instead of the man. He will thereby reduce blocking to the minimum and will get very few fouls for illegal guarding. The practice of playing the ball instead of the man ends in body check-

ing, holding, and eventually in a wrestling bout, and leaves the ball loose upon the floor.

THE PRACTICE OF GUARDING

CORRECT GUARDING STANCE



Exhibit H-1
Correct guarding stance.

Correct Stance—In Exhibit H-1, the guard is in correct stance for any emergency. He can advance either to the front or to the side as conditions might indicate. In this position his feet are set too close together for combat play, but, in the flash of an eye, he can shift to meet any style of offense that might be thrust at him from any direction. For this reason, the feet are in this close-up position—flat upon the floor with the weight of the body well distributed. This also gives partial relaxation while in posi-

Exhibit
H-1

tion. The knees are well bent to throw the whole body into a crouching attitude. The arms are extended out to the sides but are kept bent at the elbows. This makes possible a quick cut of the forearm, either up or down. With the arms in this ever-ready position, it is easier to get complete flexion or full extension quickly.

The abdomen is drawn in. The head is drawn back and in, so that the guard in correct preliminary position resembles an animal standing on his hind legs. If a guard should try to imitate a kangaroo in an aggressive position, he would get the idea of proper equilibrium.

In this exhibit, the player is mentally alert; he is conscious of the fact that he is the defender of his team's goal and that "they shall not pass."

Exhibit
H-2

Lateral Guarding—In Exhibit H-2, the guard, moving laterally after a floor bounce, is using the boxer's or the first baseman's step. This is the fundamental step for the guard to learn when acquiring his art. He has thrust his left foot to the side, with the toe pointing diagonally outward. Most of his weight is resting upon this foot. He has carried his knee over and out. His left arm and shoulder are extended to their limit to block a low pass out to the side. His right arm is carried in a free position to be ready for any attempt to pass directly over his head. If he should be forced to advance farther to the left side, he would bring his



Exhibit H-2

Correct position in lateral guarding.

right foot up to the side of his left. He would then step off to the left again as he has done here. This same movement of the feet should continue as long as the player progresses to the left. In shifting to the right, the order of the footwork should be reversed. It is natural for most players to advance with the left foot, but if the right comes more natural for some, let them use it; but never let them alternate steps, as in walking. A guard should neither progress nor retreat by using alternate walking steps; for he could too easily become overbalanced and too slowly regain his equilibrium. If the guard should desire to go forward, he should bring his left foot back to the position shown in the preliminary movements in Exhibit H-1.



Exhibit H-3

Guard in correct retreating position.

Exhibit
H-3

Guard Ready to Retreat—The guard is now ready either to step off to the front to attack or to retreat. He is using the same footwork as that of the boxer. As shown in Exhibit H-3, in retreating, he brings his rear foot back in an eighteen-inch half-step and his forward foot back within six inches of the rear foot. So long as the guard retreats, he continues to duplicate these steps. With practice in these steps, a defensive player can cover a lot of territory in a little while and can change directions more quickly by this method than by any other that has been used. When the guard travels with his feet close together, he, by taking a single step, will be well balanced and well-poised for a dart in any direction.

While either advancing or retreating, the guard should carry his left arm above his head. Note the arms of the demonstrator in Exhibit H-3. He is in position to block a quick shot over his head. He is carrying his right arm down and to the side to aid his equilibrium and at the same time to block a diverted pass to some near-by opponent.

Guard Advancing—In Exhibit H-4, the guard is advancing with the left foot forward. He will, as stated previously, bring the right foot up to the rear of the left foot, and, on the next step, will advance the left again and so on until he reaches his objective. A guard while advancing should use his head, mouth, and feet to

Exhibit
H-4



Exhibit H-4

Guard in correct advancing stance.

good advantage. He should talk his opponents out of all thrusts or tries at the basket that he possibly can. A shout, combined with a smart slap of the foot on the floor and a feint to leap into the air, will act as a deterrent to many players on the offense. The guard should call out to his team mates his ideas of the next offensive plays. This confuses the offense and many times keeps them from carrying out their previous plans and, at the same time, keeps the guard's mind alert and develops in him good leadership.

In this continued confident frame of mind, a guard will initiate many plays that may stand him in good stead when he is thrown on the offensive. He must keep his body moving all the time, in a threatening aggressive manner. A guard can get into a play quicker when he is alert and active than when he is standing practically still. A guard should get the maximum efficiency out of his anatomical machine, without a sacrifice of position.

**Exhibit
H-5**

Guard Blocking a Feint—As was shown in Exhibit H-4, the guard was advancing to attack the offense. In Exhibit H-5, he has met the enemy. The player on offense, by extending the ball to the front just out of the apparent reach of the guard, has endeavored to feint and get the guard out of position.

Without taking an extra step forward, the

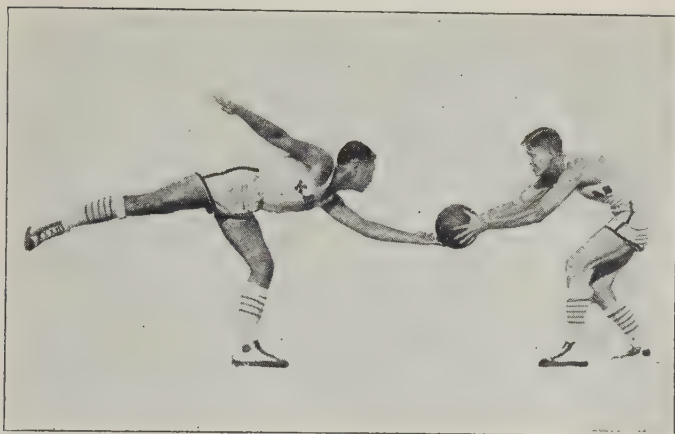


Exhibit H-5
Guard blocking a feint.

guard leans his weight to the front and wholly on his left foot. By the full extension of his left arm, he takes a long underhand cut at the projected ball. If he succeeds in striking the ball, he will drive the player on offense back without sacrificing one foot of defensive territory. At the same time, he will turn the tables on the crafty offense; for the guard's move in touching the ball will cause the offense to feel quite insecure when close to this style of guarding. This type of defense will drive the opponents farther out of reach and thus keep the territory behind reasonably safe.

Whether the guard's try in Exhibit H-5 has been successful or not, he should settle back on his rear foot and continue in the same position as shown in Exhibit H-4.

Incorrect Guarding Stance



Exhibit H-6

Guard advancing in incorrect walking position.

**Exhibit
H-6**

Incorrect Stance—In Exhibit H-6, the guard is shown in the incorrect guarding walking-position. He has walked over to the left to block a floor bounce or a lateral pass. His footwork is wrong. Such footwork weakens his defense against the floor bounce, both on the left and on the right sides. Nor can he cleverly jump into the air to block while in this position. The offense can easily catch him off-stride and get around him.

Practicing Correct Shifts—A great deal of time should be spent in perfecting these shifts with the correct forward and lateral advance and the retreating foot-movements. **Shift!** **Shift!!** **Shift!!!** Practice the shift to the front,

to the side, and to the rear. There are many ways to develop agility and lightness in the shifts. Boxing is the best method, but skipping the rope, stationary running, and handball will also improve the footwork of the guard.

BLOCKING OR GUARDING THE HOOK PASS

Guard Advancing to Block—In Exhibit J-1, the guard is advancing cautiously to the left to block a pass by the forward to a team mate. The forward is apparently intending to use a hook pass, but should the guard rush up too soon to block the play the forward might pivot to the right. The guard must play this position expectantly. This is his only hope; for he

Exhibit
J-1
(Guard-
ing)



Exhibit J-1

Guard advancing to block a pass.

must also be on the lookout for an across-the-chest shoulder pass or perhaps a one-hand underarm pass.

**Exhibit
J-2
(Guard-
ing)**

Guard Rushes the Forward—In Exhibit J-2, the guard, now being sure that the hook pass will be used, rushes the forward. In his effort to block the pass, he leaps into the air with his left arm high above his head. He has correctly used only one arm in the extension, as the use of one arm only gives him a further extension of his shoulder. Since a pass can not be curved, the guard can block a ball going



Exhibit J-2
Guard rushes forward.

over on a straight line with one hand more easily than with two. The other arm kept down at the side aids in maintaining his equilibrium. This arm position will also help the guard to get a quicker start in another direction, when necessary. Or, if a blocked pass or a fumble should come his way, he would, with this other arm kept down, be in better position to recover it.

Forward Presents Corkscrew Offense—The forward, by the mechanics of the pass, has protruded his left shoulder and arm into the on-rushing guard's face and chest. The guard, by crossing his right forearm over the forward's advanced left arm or free arm, will protect himself against the forward's advance. But the guard must drive hard and fast against this altitudinous corkscrew offense.



Exhibit J-3
Guard fails to block the pass.

Guard Fails to Block the Pass—In Exhibit J-3, we see that the guard has failed to block the hook pass. Now all that is left for him to do is to stick to the passer. He must alight ready to dart off in any direction that the forward indicates. He must watch the eyes of

Exhibit
J-3
(Guard-
ing)

the forward to discern his contemplated direction. He must always keep between the forward and the forward's goal.

Exhibit
J-4
(Guard-
ing)

Correct Alighting Position—There is only one way for both guards and forwards to alight. This is with the legs spread well apart, the knees bent to a half-squat, and the hands resting easily upon the knees.

In Exhibit J-4, the guard has just alighted and has raised his hands from his knees. According to the rules of the game, a player is entitled to his own position on the floor. The forward does not now have the ball. When he changes his position, should the guard change his stance and continue to face him, he (the guard) would be fouled for illegal blocking.



Exhibit J-4
Guard ready to meet offensive shift.

The forward can now circle outward and get back into the play. Since the guard, by rule, may neither shift over in front of the forward after he has made a move to escape, nor place his hands upon a man who does not have the ball, his (the guard's) only hope lies in his ability to cut the forward off on his way to the basket or to force him to the side line. A guard should never turn his back on the ball. "One eye on the basket and one eye on the man," is a good slogan for a guard to follow.

GUARD IN BAD POSITION TO EXTRACT HELD BALL

Guard on Right, Forward on Left—In Exhibit E-1, let us now, for defensive reasons,

Exhibit
E-1
(Guard-
ing)

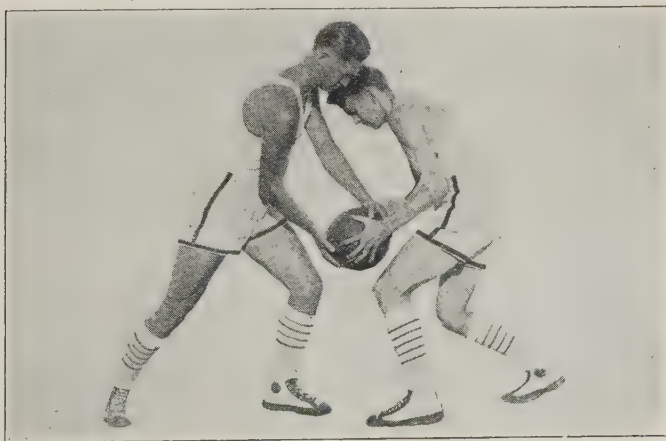


Exhibit E-1

*For defensive discussion, guard is shown on right—forward on left.
Guard in bad position to extricate held ball.*

think of the player on your left as the forward working into an offensive play; while the player on your right is the guard trying to retain possession of a held ball. He is in possession of the ball when attacked by the forward.

Guard Has Three Ways to Extract the Ball— While the guard has his hands on the ball, he should use all the cunning at his command to offset his opponent's advantage. He might use any one or all of three methods to extract the ball from the guard.

He could, by a quick jerk or twist of the ball, pry it loose; or by a lunge in one direction quickly reversed to another, get possession of the ball. If these efforts failed, he could, by charging the ball and the opponent as far backward as possible, and then by quickly changing his thrust to a lateral downward lunge, twist the ball with a snap, and jerk away.

If, in this play, the guard sees that he is losing the ball, he should use a quick underhand upper cut of the ball, with fingers and hands cupped, and with the shoulder and body following in closely.

Guard Must Use His Weight to Advantage— The guard should know how to use his weight to advantage without committing a foul. He should try at all hazards to get a held ball, by using his thighs and arms as well as his hands.

*Guard in Hard Straits—*In Exhibit E-2, the

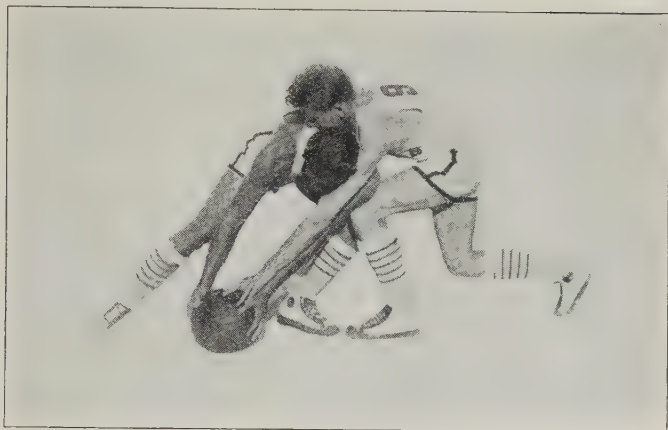


Exhibit E-2

Guard in hard straits.

guard is in a bad way. About all he can hope to get out of the situation is a held ball. Although the forward has him blocked off with his shoulder and knee, the guard must not accept the situation. He still has his left hand on the ball. By swinging his right arm and his right leg under the forward's left arm and left leg, he can upset the forward and get the benefit of the breaks by having a held ball called by the official. The guard should not try to extricate his head; for if any relaxation is made even for a second, the forward will pivot away.

Forward Pries Guard Loose—In Exhibit E-3, the forward, by the use of his arm and knees, has succeeded in prying the guard loose. The

**Exhibit
E-3
(Guard-
ing)**



Exhibit E-3
Guard thrown in awkward position.

forward in his pivot pulled the guard around, broke his final hold, and put him completely out of the play.

The Guard's Only Chance—Now, the only chance the guard has, is to leave his feet and, with his right arm forward, dive for the ball. However, if the ball is in the offensive zone, this play is dangerous. In any case, it is a difficult try, as the forward has correctly advanced his left thigh and leg. This blocks off the guard. The forward, by a right lateral shifting of the ball, has closed all of the guard's possibilities of recovering the ball. But, at all hazards, the guard must keep on his feet. A guard on the floor is a man out of the play.



Exhibit E-4

Guard to save the play must rush for the basket.

Guard Must Make a Direct Line for Basket—
The guard must now neither waste time nor lose his head. The guard should expect the pivoting forward to dribble. In Exhibit E-4, you will see that the forward has pivoted around and started off on a long, low, sweeping dribble. The guard should not attack from the rear, but should strike up a fast pace and endeavor to cut the dribbler off or force him to the side line before he reaches the basket. Most forwards count on swinging into the basket at the side. In this case, the guard could make a direct line for the basket and save time, and there present himself in proper guarding position to the forward traveling toward the basket.

**Exhibit
E-4
(Guard-
ing)**



Exhibit N-1
Guard advancing to meet dribbler.

GUARD BREAKING UP DRIBBLE

Guard Advancing to Meet Dribbler — In Exhibit N-1, the guard in his crouching stance is advancing in correct guarding form to meet a dribbling forward. When the forward dribbles to the right side of the guard, the guard takes as many regular boxer's steps to his own right as are needed.

In an effort to confuse the dribbler, the guard should slap his forefoot to the floor simultaneously with a yell and a feint to drive forward; but, in the same instant, he should shift to the right instead, and strive to break up the dribble. But he must move cautiously for he sees (Exhibit N-1) that the dribbler is using his inside arm to propel the ball. In other words, the

Exhibit
N-1
(Guard-
ing)

guard should expect the forward to spring a surprise, as good form in dribbling requires the use of the outside hand so that the ball may be removed as far as possible from the opponent.

The guard, with his right knee well bent and his right hand close to the floor, has the weight of his body shifted in the direction of the advance but is ever ready to quickly change his stance with any shift of the dribbler.

Guard Drawn Over Too Far—Exhibit N-2 shows that the guard has been drawn over too far to the right, and consequently has permitted the forward to change dribbling hands and likewise to change direction. The guard now sees why the inside hand was being used. If the outside hand had been used in this style of play, the change of direction as it was executed would

**Exhibit
N-2
(Guard-
ing)**



Exhibit N-2
Guard drawn over too far.

have been impossible, as the forward could not have changed the angle of direction quickly enough to have avoided being blocked. The guard should always keep this in mind and watch for the inside dribbling hand.

A guard caught, in this way, off-position, should shift back about three steps, then charge laterally (to the left in this exhibit) as quickly as possible, for the dribbler will try to circle around him. He should strive to cut the dribbler off by driving him to the side line. In such a position, this is the guard's only play.

Exhibit
N-3
(Guard-
ing)

Guard Tries to Prevent Dribbler From Going Around Him—In Exhibit N-3, the guard is trying to prevent the forward from dribbling around him, by using his outside (left) hand in



Exhibit N-3

Guard charging the ball. Tries to prevent dribbler from going around him.

a full underarm swing at the ball. As the guard fights the ball along, he keeps his right hand upon his knee. He must maintain this crouched position to be able to meet the shock of a fast, low-dribbling opponent.

A hard drive by the guard will make the forward pivot or at least divert his progress toward the basket. If the forward should pivot, the guard, after a slight shift in the same direction, should use an underhand cut at the ball and thus drive the forward farther way from the guard's area of defense.

Guard in Versatile Position—In Exhibit N-4, the guard is in correct guarding stance to meet, on his left, a dribble, a bounce, or a pass. He is in fine position to slash either hand up or down to block a pass which might come to the

**Exhibit
N-4
(Guard-
ing)**



Exhibit N-4
Guard in versatile position.

side or over the head. He can, in this stance, kick either foot laterally to stop a floor bounce. His left foot is ready to advance. It is within his guarding province to stamp his feet, feint, or yell as he sees fit in order to rattle the man making the dribble. He is, true to training, watching the dribbler's eyes carefully for some hint of anticipated direction. His vision encompasses the ball only in a secondary manner. His primary motive is to watch every move of the forward's eyes, hands, and feet. Through fear of a fumble, the forward is handicapped. He must watch the ball, first; the guard, second.

However, the guard must play the ball, and not the man, although he does not know what direction the ball will take in the hands of the dribbler. He, too, is handicapped. Both men in this play are playing for breaks that will come to the headiest strategist—be he guard or forward.

**Exhibit
N-5
(Guard-
ing)**

Guard Forces Forward to Pivot—In Exhibit N-5, the guard, by driving the dribbler to the side line, forces him to pivot. As the forward pivots, the guard makes a low underarm swing at the ball. The guard has advanced his left foot one regular step. His weight rests upon this advanced foot. He is now in splendid position to feint a charge forward. He should, however, at all hazards keep the forward in front of him so that his own team mate may



Exhibit N-5

Guard forces dribbler to pivot.

get better set. A heady guard will never rush this play; for if he does, the forward will pivot and draw the guard out of good defensive position.

If, in this play, the forward is too far from his goal to try a shot, it is better for the guard to shift back two steps and be ready to block any attempt at a floor bounce or a pass.

The guard had better not attempt to capture the ball on this threatened dribble, as he is very likely to be drawn into a trap that has been set for him by his opponent.

Guard Falls Into Trap Set for Him—In Exhibit N-6, the guard has fallen into the trap set for him. He has attempted to recover the ball from the dribbler and has been sucked-in. When he sees the pocket that he is in, he tries

**Exhibit
N-6
(Guard-
ing)**



Exhibit N-6
Guard thrown into pocket.

to break up the forward's pivot pass. By using the underhand drive, the guard tries to bat the ball out of the pivoter's hand before he can pass it to the trailer who is starting on a dead run to receive the pass.

At this instant, the guard charges the forward and tries an underarm drive at the ball. In his next move he intends to shift back about a yard behind the pivoter and then to cut off the trailer.

With his right hand resting upon his right knee and his forearm against the pivoter's hip, the guard is in correct position to make this try at the ball and also to make an easy shift.

Exhibit
N-7
(Guard-
ing)

Forward Legitimately Body-checks—But, as demonstrated in Exhibit N-7, the forward, by throwing his left thigh and hip outward and



Exhibit N-7

Guard drawn away from direction of opponent's basket.

backward and his arms forward, has deflected the movement of the guard's arm away from its original swing. In other words, the forward offset the guard's charge for the ball by throwing his hips back against the guard's trunk and thigh and by extending his arms full length to the front. This is what is called legitimate body-checking, and the guard must now get out of this pivot pocket quickly, or the trailer will have the ball for a drive into defensive territory.

The guard has been drawn away from the direction of his opponent's basket. By some rapid footwork, he may, by shifting to his rear and then again to his right, still succeed in protecting his territory.

Guard Must Now Rely on Speed and Weight
—In Exhibit N-8, the guard is trying to get

Exhibit
N-8
(Guard-
ing)



Exhibit N-8

Guard must now rely on speed and weight to get back into the play.

over and turn the dribbler out to the side lines. The pivot man, after delaying the guard with his pivot-pocket block, has turned to the right and is running legal interference for the new dribbler.

As a pitcher in baseball runs across the first base line to back-up the first baseman when a runner is going to first, so the pivot man turns and angles off in the direction of the dribbler. In both instances, legitimate blocking is the aim. The pivot man makes no contact with the guard but keeps giving ground slowly.

The guard's success now largely depends upon his speed and weight. He must charge in front of the pivot man and cut off the dribbler. But he must exercise care in his rush toward the dribbler in order not to be drawn out too far

if the dribbler is near the basket; for the dribbler may reverse, turn, and cut off in a circular swing to the goal. He could easily quarter-turn left, away from the rushing guard, and hook pass to a team mate who might be in position to score. A guard must always bear in mind that the dangerous shots are those near the basket. Instruct a guard to force a player with the ball away from the goal and allow the player in possession of the ball a pass to a team mate in the field, rather than permit a close-in shot as a result of the guard being drawn out.

Note, in Exhibit N-8, that the guard is using his thigh and leg against the man running interference to force him out of the way. The guard in this exhibit has made a fatal mistake. He is too high, and is now in such position that it is impossible for him to get low. He should have crouched and charged low when he shifted over, instead of shifting with his head and arms so high.

But now, by stepping back and crouching for a low charge he would gain nothing, as the time he would consume in this change of position would give the dribbler a chance to drive to his destination without interruption. Visibly, by his own mistaken charging position, the guard is blocked off and can hope only to retrieve himself in the next play, but not in this.

GUARDING A PIVOTING OFFENSE

Many of the theories on proper guarding advanced by various authorities have been too general. "Beat them to the ball and get it if you can" has been the sum and substance of much coaching along this line.

When an opponent has the ball, specific guarding technique is necessary—a definite response to a definite situation. But one general theory on guarding is too true to be disregarded; that is, that the guard should always be found between the opponent and the basket. There is no instance in basket-ball where this should not hold true.



Exhibit K-1

Correct guarding of a pivoter (right side).

Correct Guarding of Pivoter—In Exhibit K-1, if the guard recovers the ball from the offense, he will be forced to employ all of the technical skill that he has. His head, his hands, and his feet must work clearly, quickly, and accurately. Exhibit
K-1

Well executed footwork is the first requisite in clever guarding. For this reason a boxer ordinarily makes a good basket-ball guard. Because of his previous training, he picks up the art more quickly than do other athletes.

The forward, in Exhibit K-1, is being closely pressed by the guard. Not having the proper opening to pass or to shoot, the forward chooses to pivot, as this will throw him out of the path of the guard.

The guard is preparing to give the ball an underhand cut. He has directed his eyes to the side of the body of his opponent so that he may get sight of the ball. His left arm is in splendid position to keep the forward from pivoting away to the left. As you will see, his left hand is resting on his left knee. This closes the gap between the guard's body and the forward's buttocks. The guard's left forearm is resting between the forward's tuberii ischii (pelvic bones). This position makes it almost impossible for the forward to pivot around the aggressive guard.

Now, with the ball in full view, the guard can use the underhand cut that he has contemplated. He can use a full extension arm

swing at the ball *under* the forward's right arm, without losing his balance.

If he should strike at the ball *over* the forward's right arm, as many guards do, he would probably get a foul for holding. If he should escape the foul, he would accomplish nothing in the play; for if the forward should try a pivot to the left, the guard's overhanging arm would pull the guard off-balance and free the forward to dribble toward his own goal.

Note, in this exhibit, the position of the guard's feet. He has stationed himself so that his right foot is outside of the forward's right foot. His left foot is back of and in line with the forward's advanced left foot. After either a feint to strike or an actual follow-through of the guard's extended right arm, the forward will quarter pivot to the left. Then the guard should shift to the other side to repeat these same tactics there.

Exhibit
K-2

Shift Completed; Play on Other Side—In Exhibit K-2, the shift has been completed, and we see the play continued on the other side of the forward. In making this shift to the opposite side, the guard, by pressing heavily on his left knee, simultaneously with a shift of the right foot backward and across to a landing hop, has succeeded in blocking the forward off again.

It would have been easier for the guard to have made this shift directly across with his

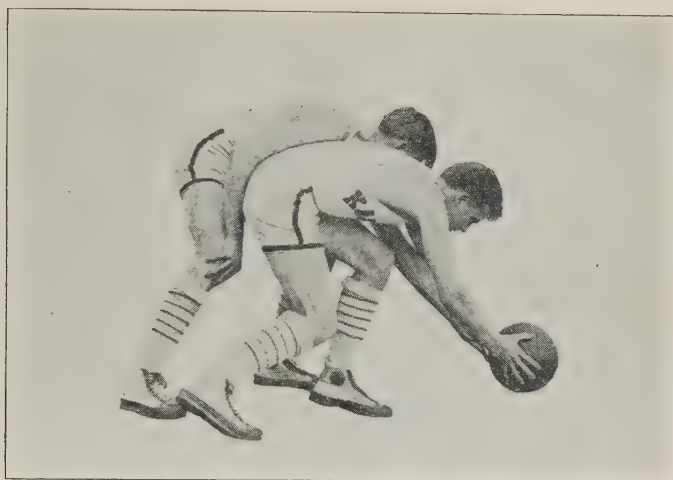


Exhibit K-2

Pivoter completes his shift. Exhibit shows guard correctly guarding a pivoter (left side).

right leg, instead of drawing the leg backward and across as he did. But the forward has intentionally projected his rear leg and hips as far back as possible to hold off the attack of the guard. As a result, the guard was forced to shift the right foot forward to clear the offensive player's rear foot.

The guard, then, as shown in Exhibit K-2, has brought his left foot to the side front and stationed it close to the outside of the forward's left foot. Now, in his reversed position, the guard's right hand rests on his right knee. The stance of the men in this exhibit is identical with that of the men in Exhibit K-1, except that the play has changed sides.

The guard is now set for any emergency. The forward cannot throw him off-balance by a backward charge because, as explained previously, the position of the guard's left arm against the forward's buttocks will prevent this.

The forward is carrying most of his own weight on his front foot. By straightening this knee, he can drive his force backward and offset any charge from the rear. He can legitimately block the guard off and at the same time, by extending his arms farther forward, can keep the ball away from any possible danger from the guard. Come what may, a guard in this position, who is versatile with this shift, has good guarding technique and a splendid opportunity to get the breaks at any moment of the game.

INCORRECT GUARDING OF PIVOTING OFFENSE

Exhibit
K-3

Incorrect Guarding of Pivoter—Exhibit K-3 shows the guard when he has not shifted over far enough to guard the pivoting forward. Unfortunately, this is not an unfamiliar guarding posture on many basket-ball courts.

In this exhibit, the guard's left foot has not been shifted far enough forward and laterally. The rear foot is too flat upon the floor. True, the brace should come from this foot, but the heel should be raised off the floor, and the weight should rest upon the toes, which must be kept in a push-off position.



Exhibit K-3
Incorrect guarding of a pivoter.

The guard's head is back too far. He has also left too much space between his knees and thighs and his opponent's body. There is too great distance between his left foot and the forward's left thigh for the guard to make a quick underhand thrust at the ball.

As stated before, the guard's forearm, instead of his humerus (upper arm), should rest between the forward's pelvic bones. This particular contact gives more agility to the guard's shift and closer contact with the opponent's body.

Guard One Short Shift Off Correct Form—
In short, the guard's whole body is one short

shift off correct position. In this incorrect and insecure guarding stance, the forward can sense the uncertain movement of the guard and pivot away before being attacked. But, by taking a short shift forward, the guard can improve his position. This short shift should advance the guard's left foot one-half step and bring his right foot to position just outside the forward's right foot. Now, with the arms brought up to proper positions and the head swung downward and forward into full view of the ball, he can, by a feint to strike at the ball, make the forward pivot in the other direction, and thus continue to worry the forward and watch for breaks.



Exhibit K-4

Guard in correct position aims to bat ball out of pivoter's hands.

Guard in Correct Position Aims to Bat the Ball Out of Opponent's Hands—In Exhibit K-4, the guard is in correct position. He has, following the forward's last pivot, shifted back to the right side. The guard is now driving the arm forward with full extension. His aim is to bat the ball out of the opponent's grasp. Bear in mind that the guard's forearm only, is resting against the forward's hip and thigh and that his left hand is firm on his own left knee. Therefore, his position is legal, and he will not be fouled.

Exhibit
K-4

Should the forward again attempt to pivot, the guard can again shift. There is decided advantage gained by the underarm cut, and advantage lost by the overarm thrust. In the underarm cut, the extensors are brought into full play; while in the overarm thrust, the flexors execute the play. By the use of the flexors, there is increased tendency to hold the forward's obtruding arm and, incidentally, to foul.

Guard Committing a Common Foul—In Exhibit K-5, the guard is committing a common foul. He has gone too far to one side to recover the ball; therefore, he must anchor himself by hanging on to the man with the ball. Thus, by putting his left hand on the opponent's hip, he commits a foul.

Exhibit
K-5

In Exhibit K-4, the correct way to avoid making this foul was discussed. In short, the



Exhibit K-5

Guard committing a common foul against the pivoter.

guard demonstrated how to play the ball instead of the man.

FOOTWORK IN RECOVERY OF BALL

Exhibit
K-6

Guard Feinting for the Ball—In Exhibit K-2, the guard is shown feinting for the ball by using an underhand cut, in order to force the forward into a pivot to the right. In Exhibit K-6, the guard, in making his shift, is using footwork identical with that in Exhibit K-2. But, instead of making the underhand cut with the right hand as before, he leans slightly backward and to the right and drives forward with his left hand. By forcing his left arm and shoulder under and through the offensive player's out-

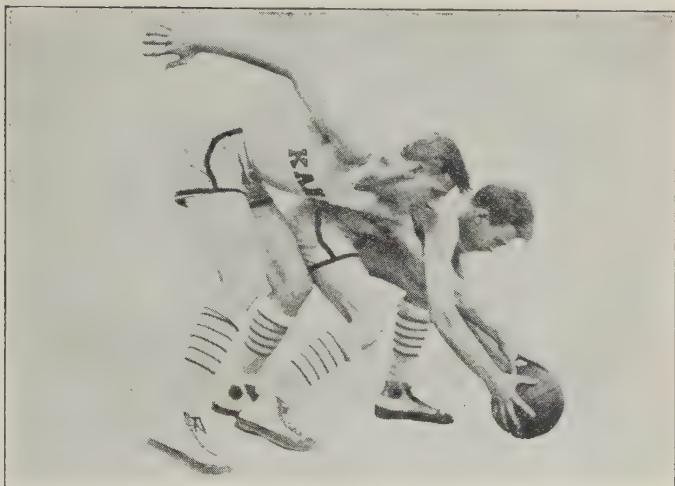


Exhibit K-6

Guard, after shifting, drives forward with left hand and follows through on ball.

stretched arms, he drives his hand through to the top of the ball. He leans against and into the player as he forces the ball downward against the floor. The guard should never attempt this inside-hand undercut until he has forced his opponent into an off-position.

Guards who can properly execute the footwork employed in Exhibits K-6 and K-7 have reached high perfection in their art. The guard in Exhibit K-6, with his inside hand on the ball, is in splendid position to recover possession of it. The rest depends largely upon footwork.

Guard Blocks Forward's Progress—In Exhibit K-7, with the same firm pressure against

**Exhibit
K-7**



Exhibit K-7

Guard blocks intended progress of the pivot.

the ball, the guard takes his left foot from behind the forward and puts it down to the side front of the forward's right leg. Here, he establishes a complete and legitimate block of the forward's progress.

Jointly with this forward movement of the left foot, the guard brings his right arm into the play. Now with an outward swing of the arms at full extension, together with plenty of pressure against his adversary's body, the guard masters the situation. In this final sweep of the arms, the ball should not be raised off the floor more than six inches. The guard's shoulder, thigh and leg have forced the forward completely out of the play. The more he tries

to hold on to the ball, the worse will be his position when the play is through. His only chance to recover the ball will be to dive for it.

Guard Masters the Play—For, as shown in Exhibit K-8, by a continuation of the circular pivot to the right, the guard gets complete control of the ball. He is carrying it low (not more than six inches from the floor) and out in front of him. His legs are still protecting the ball, and he is getting into excellent position to start a dribble. Or, from this position, he could execute a hook pass, a two-hand under-hand pass, or a shove-shot floor bounce.

Exhibit
K-8



Exhibit K-8
Guard masters the play.

CHAPTER IV

Team Offense

THEORY

When a team is in possession of the ball, it is on the offensive. When it loses possession of the ball, it is thrown on the defensive. A team's ability to get from one to the other quickly is often the deciding factor in its success. Theoretically, the offense is much stronger than the defense.

At present, there are but two types of basketball offense that function. These are *the four-man offense* and *the five-man offense*. But there are countless variations of these offensive styles, as is evidenced by the hundreds of different plays that can be worked out from them. Teams that are most versatile in repertoire, often use both styles of offense, or a combination of both in the same game.

The Four-Man Offense—In the four-man offense the rear guard does not try to score and seldom goes past the center circle. This is the generally accepted offensive style in many schools. In fact, most of the larger conferences employ only the four-man offense. The main reason for this choice of offense is that it eliminates the possibility of leaving the goal unguarded at any time during the game.

In the four-man system, the rolling offense formation works well. This rolling offense possibly bewilders a team which is unacquainted with its method of execution more than any other style of play.

The Five-Man Offense—While the team is on the aggressive, the five-man offense does not recognize floor positions. It operates on the shuttle plan, the guards working back and forth—one guard, down, and one, up. Any combination of four may carry on such an offensive. Sometimes it will be the center or one of the forwards who will drop out of the play and become the rear guard, and again, on signal, the rear guard will go down on the offense and another team mate will take up the place vacated at guard.

This style of play calls for experienced and versatile players, and is much more hazardous for both the offense and the defense than is the four-man offense; because, if there should be a flaw in the workings of this five-man offensive machine, the defense might intercept the ball and break through to an inadequately defended goal.

This style also brings more hazard to the defense pitted against it than does the four-man offense, for the reason that the five men in the play are much more difficult to spot and to cover than are the four men in the other style.

The five-man offense is, in reality, always a surprise attack; and the combinations of plays that can be worked out from it are almost without number. This is not so true of the four-man offense, from which comparatively few surprises can be sprung, because there are five men on defense against four on offense. In short, the five-man offense is the foster child of surprise and chance; but if a team never takes a chance, in the end it never gets far. Be sure of your team's merits and of its foundation, its groundwork in fundamentals; then sanely open up on every chance that the game offers.

It is usually the more daring team—a team willing to take outside chances—that plays a five-man offensive. If executed properly, it is brilliant and scintillating and far superior in point of results obtained than any other style that has as yet been used. However, regardless of the style of offense used, there are many ways in which to work the ball down the floor. The most popular methods are the short pass, the long pass, and the combination of both.

One of the first teams in America to use the short pass and to stick patiently to it was the Buffalo, New York, German Y. M. C. A. aggregation, which, in addition to making a phenomenal record, succeeded in winning the Pan-American championship at Buffalo in 1900 and

annexed the Olympic title at St. Louis in 1904. This team swept all opposition before it for a period of twelve years.

Following the date of these conquests by the Germans, the pivot rule was made more liberal, and a thoroughly revised game gradually evolved. With this evolution of the game, the players were permitted to start a quick smashing dribble up the floor, with one hand only, and to recover the ball just before the defense was able to get it; then, by quickly pivoting on the rear foot, the player could reverse his position and present his back to the onrushing guard. A trailer followed about ten feet behind the dribbler so as to be in position to receive the ball, on a drive. The dribbler then reversed and passed to the onrushing trailer, who sliced off in an open zone. The trailer, then, either continued this style of play, or shot for a basket as the occasion demanded. These are some of the principles that have made the short pass game the dominant style of the present day.

There is nothing mysterious about the short pass, short shot game. It has been a natural growth—the real success of it lying in the fact that it makes legitimate blocking possible. True, it is complicated, and it takes many hours of patient, laborious effort to get a smooth working outfit. However, it is not necessary to have a team of star players to work this style

of game; but it does take a mechanical team well drilled. The main point in its execution is the development of footwork so that the men may be able to command a maximum area of floor space in which to pass by pivoting and reversing.

The dribble, the bounce pass, the short pass, and the long pass worked in with a revolving triangular or rolling offense, together with the reverse and the pivot, serve to complicate the playing and to bewilder the defense. The pivot has made it possible for a player to pass to anyone on the entire court without being pocketed or blocked-off by the defense.

The short pass game keeps more men busy all the time than does the long pass game. The short pass game keeps every man active mentally and physically during every minute of play. There can be no loafers on a short pass team, but there is an opportunity for men to loaf on a long pass team.

The long pass was one of the first passes to be used in basket-ball. It worked, in its earlier days, better than it does now; for, in those days, it was easier for the "sleeper" to evade the guards, because the guards were so intent upon watching the ball in the hands of their own team-mates that they would neglect their jobs. A long pass team always employs a "sleeper" who stays around under or near the offensive

basket, and either receives the ball and tries for a set-up at goal, or receives it and passes to one of the forwards who cuts down the side line and in, toward the basket. This style of play has some very evident weaknesses. One is that, on account of the distance that the ball must travel on the long pass, the defense can easily gage and either cover the man or intercept the ball. Another is, that it is a difficult matter to get the fifth man into the play quickly enough to be of much use to his team-mates down the floor. It is practically impossible to get more than four men into the immediate long pass game.

Still another weakness of the long pass game is that, should the ball on a long pass be intercepted by the opponents and a quick thrust be made into their own territory, the previous offense, now suddenly thrown on the defense, would be left widely scattered and could not assemble quickly enough to present an effective defense.

Spot Basket-ball—This style of basket-ball is played by teams that work on the theory that basket-ball should, in its execution of play, operate on the same general plans as football. In this style of game, every player on offense moves to a designated spot on a certain count. The signal being given, the play immediately goes into operation and functions exactly as

planned, regardless of the defense. In other words, the offense plays the designated spots, and figures that, by so doing, the ball will have been so well-timed that it will reach the spot as scheduled and that a certain player will be there to receive it.

The weakness of this style of play is obvious. When the offense rushes to apparent places of advantage with little concern as to the possibility of losing the ball, it has utterly ignored the cardinal principle of passing,—namely, that a player should pass to an unguarded position. The pass in spot basket-ball is apt to arrive at its destination just in time to find an opponent playing that spot and ready to receive the pass. It is an unsafe style and is used practically not at all in this section of the country.

Team Strategy—Taking decided advantage of strategic moments during time out periods determines the success of versatile teams. Athletic battles are as truly won in these hasty heads-together conferences on the court, when time is called out, as are military engagements decided, by small details despatched to precarious duty, under the protection of their own strategy.

Often in the heat of the game, a team does not obey the instructions given in the dressing room, regarding offensive play. The team may have an off-night and not be going well. It is

then that the captain should ask for time out as soon as he gets possession of the ball.

In these time-out periods, after the application of wet towels to necks and faces and vigorous rubs with dry towels, the men should be receptive to constructive suggestions by their captain. Probably the most efficient method of presenting such suggestions is for the captain to ask direct questions.

"Center, are you timing your tip-off so that the men driving through are receiving the ball at the designated spot?

"Are we leaving our feet and driving high and hard into the air when we receive the tip-off?

"Are we breaking rapidly on the offense?

"Are we playing for every break?

"When forced on the defense by the loss of the ball, are we covering hard and fast?

"Are we changing pace at will or do our opponents set our pace for us?

"Are we talking enough during the game?

"Men, are we fighting our hearts out, for our school? Let's go, gang."

Such "get togethers" during time-outs encourage the men and make them more sure of their play.

It is good team strategy to work a "sleeper" under the basket when the defense is absorbed with up-court activity. It is also good team strategy, if the men are overwrought, for the captain

to order the back-court or held-ball game as soon as the ball is put into play and possession is obtained.

The offense, when not overwrought, should keep the ball constantly in motion, as there is a psychological point involved which must not be underestimated. By such offensive strategy, the defense is unconsciously made to feel the loss of the possession of the ball. Possession of the ball is the main object of the game. The subconscious feeling accompanying prolonged lost possession of the ball grows into the feeling of the loss of the game and often results in a breakdown for the team that is thrown constantly on the defensive. This possession of the ball by the offense can be obtained only by cleverness on the part of five wide-awake men skilled in swift accurate passing along certain definite passing lanes and angles, where they will keep the ball constantly in motion. A team that can successfully carry this program through, will display many of the essentials of winning basket-ball strategy.

FORMAL OFFENSIVE PRACTICE DRILLS

Purpose—Drill in teaching mass or team fundamentals must be followed with the same earnestness as is drill in teaching individual fundamentals. In these drills that follow, your aim as a coach should be to acquaint the entire

squad with all necessary fundamentals. Dribbling, pivoting, reversing, feinting, passing, and goal shooting, all comprise a part of these drills. This means that ultimately out of them will evolve a combined team-offensive.

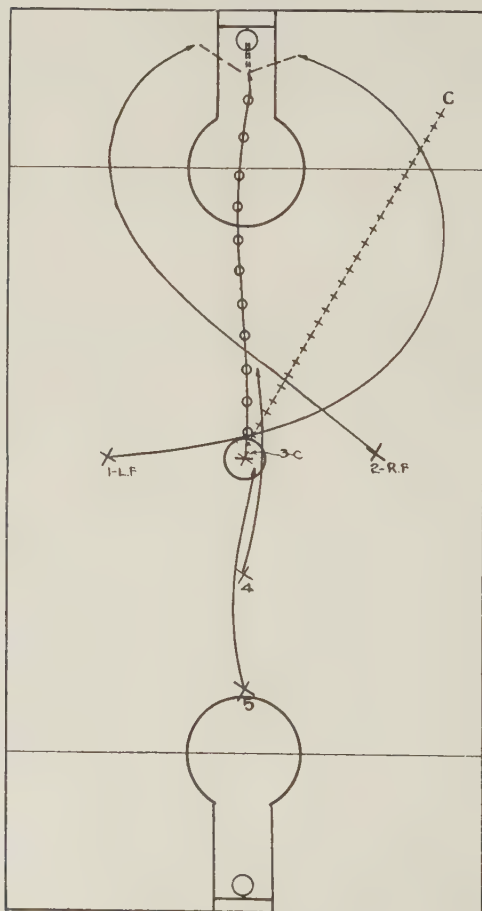
Any number of practice drills can be worked from the following set-formation: Work the men in squads of five. Line up the forwards and centers in a row in the middle of the court, and facing the basket. The floor guard and the rear guard should be in line with the center, and in their own half of the court. The guards should not move up until the primary three start the execution of the play. Then the floor guard advances, followed by the rear guard. The eight drills that follow are worked from this formation.

OFFENSIVE DRILLS WITHOUT OPPOSITION

Drill 1—Coach off to the side and near the corner floor-bounces to the center, who always advances to meet the ball. Center starts fast dribble toward basket. No. 2 (right forward) cuts across in front of dribbler while No. 1 (left forward) swings in behind and on around to basket. Center passes to either of the two forwards near the basket. No. 4 (floor guard) acts as trailer for center who is dribbling. No. 5 (rear guard) comes up, on the play, to the position vacated by floor guard. The ball is played until a goal is made. There should be no oppo-

Diagram
3

DIAGRAM 3
PRACTICE DRILL



Drill 1, without opposition.

sition. In this drill, the center sometimes dribbles on and in to the basket and "lays" the ball over the rim for a goal.

Drill 2—Coach floor-bounces to center who always advances to meet the ball. Center drives forward on short dribble. The two forwards crisscross in front of center. Center floor-bounces on outside of No. 1 (left forward). No. 1 receives the ball on the bounce and swings on around, dribbling in to the basket for a shot. No. 2 cuts in on the opposite side for rebound work. Center drives on toward basket for rebound if needed. Floor guard drives on down center of court on follow-up to position vacated by center. Rear guard comes up to position vacated by floor guard.

Diagram
4

Drill 3—Coach floor-bounces to center. Center short floor-bounces to No. 2, who cuts across in front of center and dribbles to the left and around toward the basket. No. 1 cuts in behind No. 2 and No. 3 in the direction of the open right side for a follow shot. No. 3 trails No. 2 on the outside. At a given point on the goal zone line eight feet from the side line and sixteen feet from the center of the court, No. 2 pivots out toward the side lines and passes to No. 3, who swings on around, dribbling in to the basket for a shot. After the pivot by No. 2, the right forward reverses and cuts in toward the basket for rebound work. No. 4 follows drive

Diagram
5

down center of court for follow-up. Rear guard moves up to position vacated by floor guard.

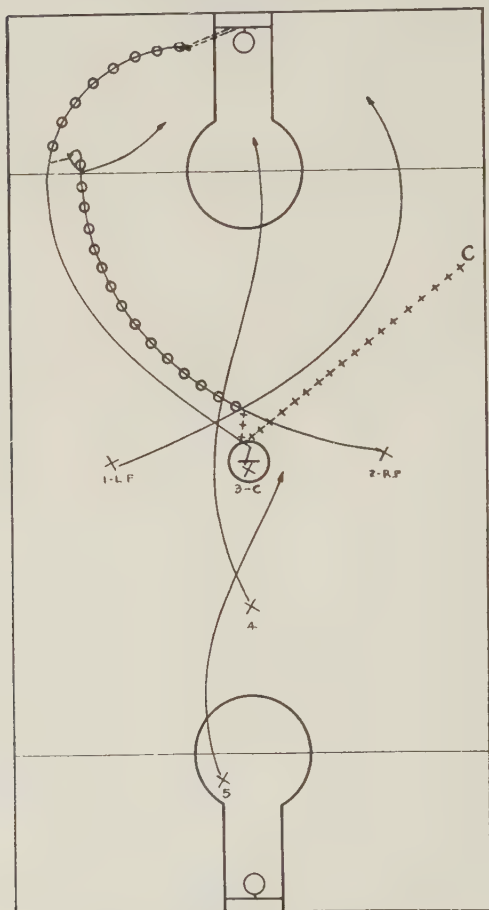
Drill 4—Coach floor-bounces to center. Center short floor-bounces to No. 2 (right forward), who dribbles across and around toward basket. Left forward cuts around behind right forward, and No. 3 (center) trails No. 2 on the outside as in Drill 3. At a point in the middle of the court near the back of the foul circle, No. 2 pivots out towards the side line and fakes a pass to No. 3, who continues on his way to the basket. No. 2, after the feint to pass, makes a back pass to No. 4, who comes down the center of the floor and dribbles directly in front of the basket for a shot. No. 2 now reverses and cuts in to the basket for rebound work. No. 5 advances to the position formerly occupied by No. 4.

Diagram
6

Drill 5—Coach floor-bounces to center. Center dribbles down to region well back of free throw line. Both forwards crisscross behind dribbler on their swing toward the basket. As No. 2 comes around behind the dribbler, he (the dribbler) pivots out toward the side line and fakes a pass to the right forward. This forward reaches out for the ball much the same as does a half back in a fake pass from the quarter, but continues on his way to the basket. The center now turns and fake-passes to the floor guard who drives by, faking to take the pass from the center. The center now back-passes

Diagram
7

DIAGRAM 5
PRACTICE DRILL



Drill 3, without opposition.

to the rear guard, who has already moved up to the floor guard's position and is in good shape to dribble on in for a shot directly in front of the basket. The center cuts out and around to the left for a follow shot on rebound work. Using the rear guard on a play of this sort would not be attempted in a match game, but in drill work it is splendid to keep up interest and to teach team fundamentals while they are not so expensive to learn. Every man who figures in such a play will develop initiative.

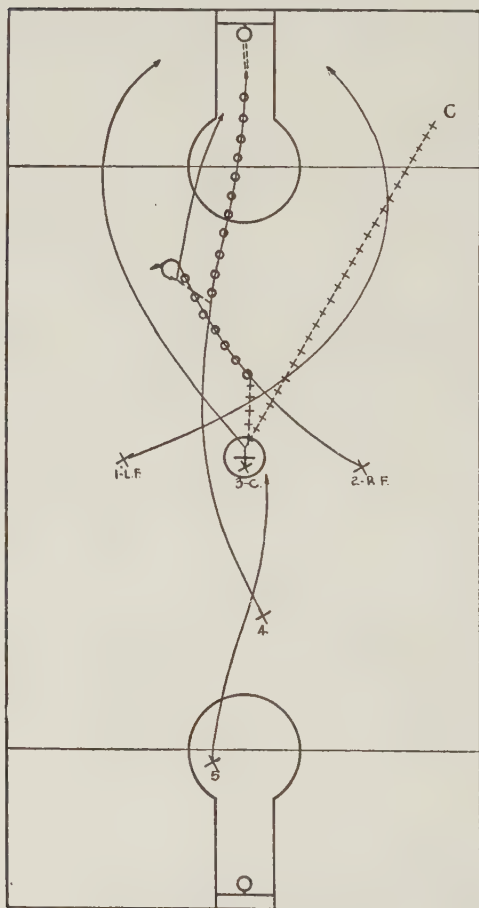
Drill 6—Coach floor-bounces to center. Center dribbles down to right side of court, allowing the right forward to cut in front and the left forward to cut behind. Center pivots and fakes to pass to left forward, and then passes to the floor guard, who comes down, receives the ball, and hook-passes to the right forward, who has swung around to the basket. The center reverses and drives in to the basket for rebound work and thus assists the forwards. The rear guard follows down the field and takes up the position that the floor guard formerly occupied.

Diagram
8

Drill 7—Coach floor-bounces to right forward, who in turn chest-shoves on a floor bounce across the floor to left forward. Left forward chest-shoves with floor bounce to right forward, who has advanced diagonally across floor toward the basket. Right forward floor-bounces to center, who dribbles toward basket, while the

Diagram
9

DIAGRAM 6
PRACTICE DRILL



Drill 4, without opposition.

left forward continues around toward basket also. Left forward crosses over behind center to open right side for follow work. The floor guard drives toward the basket to receive a back pass from center and dribbles in to the basket and shoots. The center, after pivoting, reverses and cuts toward the basket for rebound work. The rear guard follows down the court and takes up the position of the floor guard.

Drill 8—Coach floor-bounces to left forward, who dribbles over toward side lines and then swings in toward the basket. The right forward swings across the court in front of the center and also in front of the dribbling left forward. The center swings over toward the left side of the court, then back to the right side in a circular fashion and finishes by coming up under the basket on the right side. The floor guard drives straight down the center of the court and receives a back pass from the left forward who has pivoted. The floor guard now hesitates for a moment, ready to shoot or to pass. As the left forward by a legitimate pivot has the floor guard protected from attack, the guard can now practice on his footwork. By maintaining a crouched position, the floor guard steps forward and backward with his left foot while the right foot is kept in position. After several feints to shoot or to pass to a team mate, he tries a high push arch shot. All players drive

Diagram
10

in for the rebound. The rear guard has again followed down to the floor guard's vacated position. The left forward, after letting the floor guard shoot, quickly reverses and cuts out to the left side of the basket for rebound work.

OFFENSIVE DRILL WITH OPPOSITION

In the preceding practice drills, all work was done without any opposition. After much practice on these drills without opposition, place one guard, only, directly under the basket and instruct him to harass the offensive advance as much as possible. This will give the offense its first taste of defense.

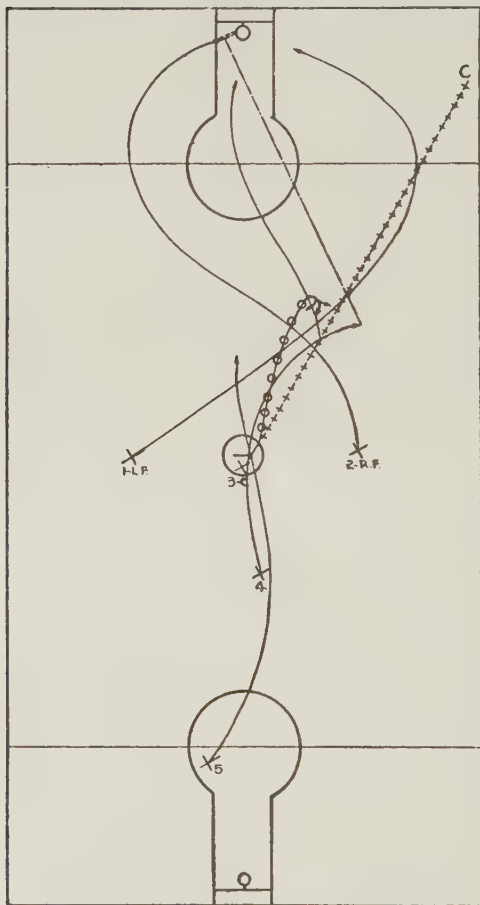
When the offense scores regularly with the one guard opposing it, add a second guard. Then as conditions warrant, add a defensive center. These three men on defense should cause lots of worry to the advancing quintet.

Now, make a rule that the ball shall be twice in possession of each offensive man before the offense can attempt a goal against the defensive trio. This is good practice in learning to evade the defense by passing.

Finally, add the two defensive forwards, and send the offensive five against the regular defensive line-up. You will soon see, with full opposition thrown into the play, how well the men have mastered their fundamental drills *without* opposition.

DIAGRAM 8

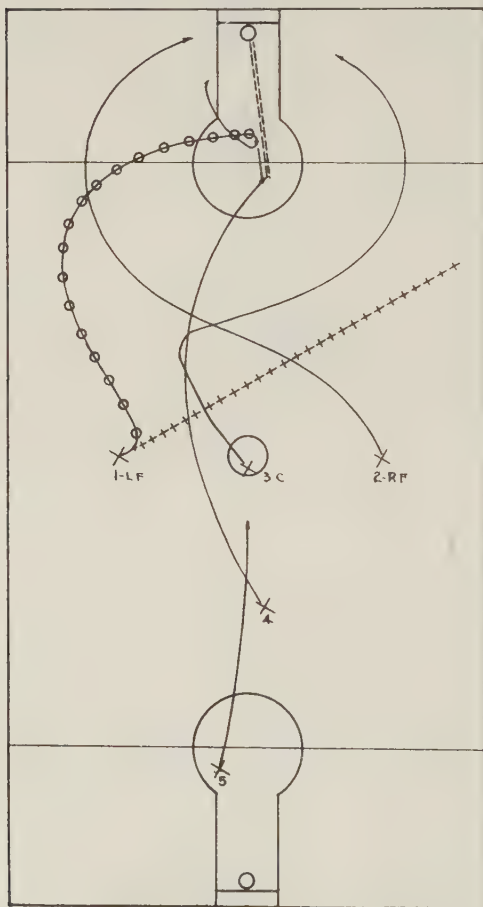
PRACTICE DRILL



Drill 6, without opposition.

Drill 7, without opposition.

DIAGRAM 10
PRACTICE DRILL



Drill 8, without opposition.

When a violation or a penalty is committed by either side, call the ball dead, and start the play again. Each time after the ball is called dead, put it again into play by a floor-bounce to the offensive team.

Offensive Rear-Guard-Signal Drill Against a Set Five-man Defense—In the previously discussed drills where full opposition was gradually thrown in, there was no well-defined offensive formation that could be changed after the men had started their advance. In this drill, if the offense suddenly finds itself confronted with a defense drawn out of position, a rear-guard signal is used to divert the plan of attack.

For instance, the offense is sent against a set five-man defense. The offensive running (floor) guard, if conditions should suddenly warrant it, is in a splendid position to call out a numerical signal and, in a flash, change the offensive style of attack even after the offense is deep within the opponents' territory.

Many times this little trick will give an intelligent and versatile outfit the advantage of a break which will win a game. Because the floor guard, while facing his own basket upon which his team mates (forwards and center) are advancing, can survey the weaker spots in the defense. He is in vantage ground to shout out a signal which will designate the most versatile

offense to use in the event of a sudden change in the defense.

If this late signal drill should show up well in practice, by its continued use the team might find it expedient for games. Personally, on account of the confusions of sounds and on account of the danger of this vocal signal being drowned in the noise of the crowd, I hesitate to recommend its unqualified use in a game. There is too great a danger of "balling up" the team.

INFORMAL GAME DRILLS FOR TEACHING MASS FUNDAMENTALS

Twenty-one—This game of "Twenty-one" is another drill that will stimulate the men to their best efforts. In this game, a premium is put upon accuracy, as direct hits count 3 points, rebound hits count 2 points, and a follow shot counts 1 point. The team that first gets a total of 21 points wins. This is also a splendid drill to teach the men coolness under pressure of competition.

Directions for the drill: Use five men on each competing squad. Work two squads (one at each basket) at a time. Restrain each team by a line twenty-five feet from its respective basket. This distance can be advanced or retarded as conditions warrant. Give each squad a ball and instruct the men on both squads to shoot in rotation. There is no rule that the two

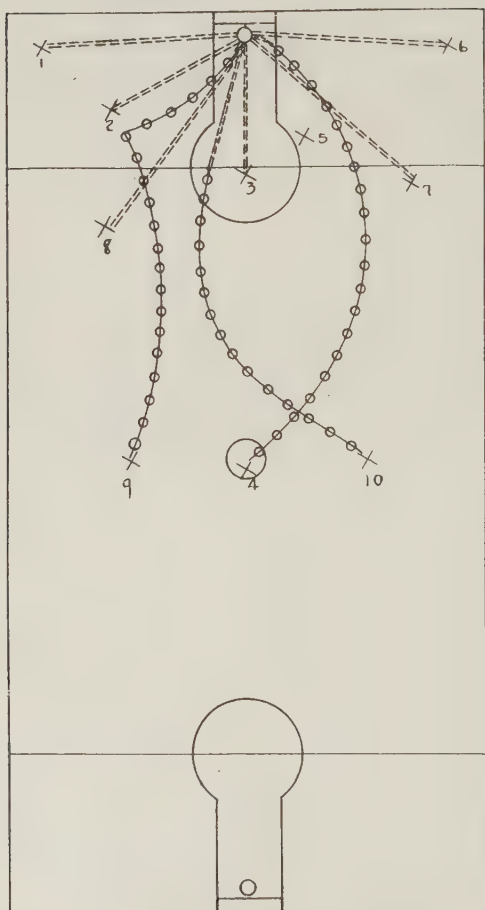
teams must take an equal number of shots but the men on each squad must shoot in rotation; and each man must shoot until he makes a goal, —on a direct hit, a rebound, or a follow-through. Of course, the more accurate shooting team will win, as seven direct hits will decide a contest. The player that shoots and misses either a direct hit or a rebound must follow up and score his one point unaided. After the goal is made, the player making the goal passes the ball to the next man in the shooting line.

There are no restrictions on any of the men as to the kind of shots they use to make their goals. So they will naturally employ the ones with which they are most proficient.

Make a list of the kind of shots that each man uses under the stress of this desire to score, and later, specify that each man shall use a shot different from the one used in the last contest. In this way, the players can readily see how weak they are on the shots that they seldom use, and they will then be in a receptive mood for the fundamental drills in the teaching of the various shots,—so concerned will they be about their scoring power.

It is a good plan to bring the element of time into this game. Put a watch on the players each day and see if the winning team can score its 21 points back of the twenty-five-foot line in three minutes or less.

DIAGRAM 11
INFORMAL GAME-DRILL



100% game.

100% Game Drill—This drill is designed to teach versatility and accuracy, the stress being placed upon versatility in the use of fundamentals. Directions and rules for playing follow: Play this game the first thing after the squad reports for practice in the afternoon. It gives the squad a good limbering up and develops the players' floor technique.

Diagram
11

The men work in squads, preferably five on each squad. Each squad uses its own basket and all squads that are working compete for the highest team score. Each man competes for his squad on the scale of 100 points for a perfect individual score.

Outline for each squad ten positions on the floor, as shown in Diagram 11, from whence ten specified fundamentals will be executed by each man on the squad. Consequently, each man gets a try at a different shot or play from each of the various positions. Each try counts ten points toward his perfect score and ten points toward his team's total score. A violation or a penalty incurred by one of the competing men will take ten points off his individual score. Practically all of the essentials of basket-ball can be taught from such drills as this.

In starting this drill, pass the ball to the player who should, in his various tries, swing into positions that simulate every possible game

condition. After the player has executed each try, he should throw the ball back to the coach or to the director of the drill before he begins his new try. In this drill, the player must never, between plays, carry or dribble the ball from one position to the other, for, by so doing, he would not be simulating game conditions. In games, men do not dribble away from the basket and then turn and shoot toward it, because in this event the guard would be between the player and the basket; neither do men in games run with or carry the ball. Each man, when in position to score, must shoot at least by the time he hears the count of three. A violation of technical play during a try invalidates that try at goal, even though the try has been successful. Therefore, the score for this try would be zero.

An outline of a tentative program for an afternoon of the "100% Game Drill" follows: The crosses used (see Diagram 11) indicate the specified areas on the floor from which the players will work, and the numbers indicate the order in which the plays will be made.

The tentative shooting program is outlined here only for the purpose of setting forth a practical outline that is subject to change as conditions warrant.

1. Player standing in corner of court within 3 to 5 feet of the end and side lines receives the

ball and chest-shoves or push-arches a shot for the basket.

2. Player standing in court on the left side, between corner and free throw line, uses an underhand loop arch carom against backboard.

3. Player standing back of free throw line makes a free throw try for goal by using the underhand loop arch shot.

4. Player standing back of the center of the court receives a bounce pass from coach and dribbles without opposition down the court, to the side of the basket. As the player nears the basket, he uses the one-hand english follow shot against the backboard in a try for goal.

5. The player stands near the free throw line ready to break up an opponent's dribble. This is his task from this location at point 5. He can advance or retreat to keep the dribbler from scoring. If the guard prevents the dribbler from scoring, ten points are added to the guard's score. Merely dribbling past the guard does not make his try a failure. The dribbler must also cage the ball before the guard has lost his chance to increase his score.

6. Player, standing in position in opposite corner from which try No. 1 was made, makes a push arch shot for basket.

7. Player repeats his play No. 2 on the opposite side at the same relative angle but farther out in the court.

8. Player, standing about 20 feet from the basket and at an angle of 45° with the surface of the backboard, push-arches his shot for the basket. He does not aim to play the backboard, but intends to make a direct hit if possible.

9. Player takes the ball from the coach on bounce, back of the center circle. The player reverses the conditions in play No. 5. Instead of breaking up the dribble, as in the play just mentioned, he is now forced to attempt a successful dribble past a guard who has been stationed near the goal zone line.

10. The player again receives the ball on a bounce pass back of center. Station the guard on the free throw line with instructions not to advance too far to meet the dribbler. The dribbler advances down the center of the court. When he gets within shooting range, yet still far enough in front of the basket so that the guard on the free-throw line cannot block the ball, the dribbler rises on one foot, and with a long, two-hand underhand loop arch shot raises the ball high in the air for a floater. He then cuts around the guard for rebound work. The guard will resist him in this effort. Either the direct hit or the goal from the follow shot will count as a perfect score on this try.

Players striving to outdo each other will work hard on these events in off-hours. The events can be varied to suit the needs of any squad.

Always conduct these competitive drills as team or squad events and not as individual contests. If handled in this way, the stronger members will coach the weaker ones in shooting so as to improve their own team percentages. The commanding desire is to win, and this desire is the first incentive toward co-operation or teamwork.

Pepper-Passing—Line up the men informally in squads of five. Give each squad a ball and instruct the men to see which squad can make the most passes in one minute. On the command, "Ready," they will start. Every fumble will lessen the chances of the squad making the highest score, as only completed passes will count. The speed used in the execution of the completed passes is the deciding factor in the competition.

In the presentation of work in fundamentals, it is easy to provide many practice games of this nature. The love of competition is one of our most dominant appeals, and keen competition makes the grind of practice easier.

"You Know Me, Al"—The purposes of this game are to whet the wits and to improve the passing accuracy of the players; to develop the dribble, the quick stop, the pivot, and the reverse; and to stress the fundamental use of the low one or two-hand underhand pass; and to

especially emphasize the use of the hook over the shoulder pass.

Instructions for playing: Divide the court into two equal parts, and the players into two squads of five each, each squad occupying one-half of the court.

Arrange the men in a circle and direct them to note particularly the name of the man standing next to them on their left; for, in the game, this will be the only player to whom they will be permitted to pass. For instance, if the men are standing in the order of Bill, Charles, Tus, Bob, and Verne, Bill can pass to Charles only, Charles to Tus, Tus to Bob, Bob to Verne, and Verne to Bill.

Each squad must have its own ball and must play the game in its own allotted floor space. The men on the respective fives should be selected with the idea of using them later upon the same team. This will acquaint the men with the offensive tactics of each other and will gradually develop an *esprit de corps*.

Upon the command, the squads should begin passing, dribbling, and pivoting. The player in possession of the ball must locate his man and call his name before passing. Keep the men constantly on the move, crisscrossing and reversing, for they must endeavor to partially lose themselves from the passer.

This drill places an added responsibility upon

the dribbler, who must observe the playing rules on violation. However, when the man to whom the dribbler is to pass is difficult to locate, the pivot gives him easy access to the entire court and a chance to hunt his man. But in this game, the hook over the shoulder pass possibly presents more opportunities for its user than does any other play.

"You Know Me, Al," implies no competition whatsoever. It is more of a prank game in which the direct interest lies in the ability of the receiver, by crisscrossing and reversing, to evade the passer; and also in the ability of the passer to find his man and to refuse to be evaded.

Crow and Crane—If the thought of competition in practice drills is cross-graining the men so that they are showing symptoms of irritability in practice, here is another game that will lessen the strain for a time. The day after a gruelling scrimmage, it is well to make things less severe. This game was designed to relieve stress of mind.

Instructions for playing: Any even number of men can play "Crow and Crane,"—fifty as well as ten. Command the men to line up in the middle of the floor, lengthwise of the court. Then have them count off by twos to the left. Number ones then cover off with number twos, backs to each other, and two yards apart. Designate which side will be crows and which, cranes.

In a brief instruction to the men, announce that on account of the similarity of the first sounds of the words "crow" and "crane," close attention to commands will be necessary.

The areas outside of the side lines are the safety zones. When the coach shouts, "Crow," the crane must turn and tag the crow before he escapes to the side line, and vice versa.

When giving the commands, "Crow" and "Crane," the first parts of the words should be long drawn out and the last parts snapped at the players, as, "Cr-r-r-r-r-row! Cr-r-r-r-r-ane!"

When a man has been tagged, he is out of the game. Play should continue until one side is entirely eliminated. Such time will not be long; for, through trickery by calling the same name three or four times in succession, such general confusion will result that both sides will be rushing to a clinch in the middle of the floor. Having failed to interpret the commands instantly, the men suddenly will find themselves unable to make their correct decisions quickly enough to get started. This game, by keeping the men in both lines mentally on their toes, develops alertness of mind and agility of body. But its big purpose is to help the men to forget, temporarily, the season's grind. As stated in an earlier chapter, this game is a fine antidote for mental staleness.

If the humorous confusions that it will promote succeed in bringing unqualified jollity for a time, they have accomplished much in the building of your team, and, after five or ten minutes, you can turn to your day's order of events with the men refreshed mentally and ready for their setting-up exercises and the day's routine.

5 or No Count—This game drill is designed to develop shooting accuracy in the push arch or chest shove shot. Instructions: Beginning on a line with the basket, one yard from each side of the outer rim, paint a row of five white three-inch circles on the floor one yard apart and on each side of the basket. If your court should be equipped with more than two baskets, it will be well to use them all in this drill, and thus accommodate as many men at one time as is possible. In this drill, six baskets would serve twelve men at one time. Six are mentioned, because many courts are equipped with this number.

Each player on the squad must begin his shooting campaign on the first of these circles. The two rows will accommodate two players at a time. Each participant in this drill must make five consecutive direct hits before he can move back one yard to the next circle to repeat his first performance.

By a direct hit is meant a hit wherein the ball is dropped clear of the rim. It must sink

through the netting without touching any part of the rim.

To basket-ball players, this assignment of five direct hits from each circle before progressing to the next, sounds very simple indeed, but in actual execution it is much more difficult.

When a player succeeds in executing five perfect tries from each of the five circles in either row in a single afternoon, he has the privilege of graduating permanently from this fundamental routine. This means that a player using the push arch or chest shove shot shall have made twenty-five consecutive direct hits in a single afternoon. Regardless of how near perfect a previous score has been (even if a player has a perfect record up to the twenty-fifth try and then fails), he must begin all over the next afternoon. Nothing short of perfect counts.

This is an effective drill for the men who report at the gymnasium in early fall and insist upon getting into mid-season trim "right off the bat." This drill, both effective and profitable, holds such players in check and keeps them from getting hold of the ball and recklessly shooting in a harum-scarum manner. It gives the player a definite aim, and the coach, a splendid opportunity to halt the men for special zone and court instruction.

The quiet way in which the fundamental drill

goes on eliminates the possibility of raising too great a sweat, thereby decreasing the risk of catching cold when halted for instructions in making the shots.

Impress upon the men, from time to time, that, unless they can carefully poise their bodies and shoot clean goals when there is no opposition, they certainly will not be able to when crowded by opponents. Players can profitably employ their early afternoon practice hours on this drill during the entire competitive season.

The only touch of competition given to this drill is to see how many men can graduate from it in a single season.

Have no fear of your men completing this drill too soon, for some of the best shots on a team are seldom able to get beyond the three-yard circle during an entire playing season.

Hot Point Tripple Tipping Game—This game is intended to increase the efficiency and accuracy of the men in tipping the ball into the basket from scrimmage. With six baskets available, thirty men in squads of five can work at one time.

Instructions for playing: Line up the teams under their respective baskets; then toss the ball up in the air near the rim of the basket. The five men in the game will immediately rush in to try their individual luck at tipping or batting the ball into the basket.

The ball must at no time during the play momentarily rest in the hands of any player, as this would give the advantage of a semi-toss to this particular player. In an effort to develop finger tipping technique, see that the ball is clearly batted into the basket by one or both hands.

Should a goal be scored by a toss or a semi-toss, the score does not count; and the game goes on without interruption, just as if no illegal play had been made.

The player who first tips three balls into the basket can drop out, and so on until the last man has completed three successful tips.

A good volley ball player is generally a tipping specialist. His form in volley ball is good for this phase of basket-ball. The player, in the act of tipping the ball, should raise one or both arms high above the head and throw the palms of the hands far back, ready to strike the ball when the opportunity comes. The ball should be struck with the cushions of the fingers in a slicing manner, thereby giving a reverse english to the ball when it strikes the backboard or the rim of the basket.

Competition is strong in this game. Every man wants to be the first to finish. Especially does no one desire to be the last to finish his three successful tipping tries.

This is a splendid drill for keeping the men constantly at work on essentials of the game without them quite realizing the routine of it all.

If you should keep a record from day to day of the men who are most proficient on the tip under the basket, it will give you valuable information for your regular season's games. In planning your plays for such games, you will then know who of your men are most expert on the tip. Many goals can be scored in this way by a player who is adept in the finger manipulations necessary to artful tipping.

MASS DRILL WORK IN EXECUTING AND IN BREAKING UP THE DRIBBLE

No play, matter it not how cleverly planned, has ever won a game for any team on its own merits alone. The success of plays is in direct proportion to the ground work of fundamentals employed in their execution. The best plays in the hands of teams unskilled in fundamentals are worse than no plays at all.

The following mass dribble drill cannot be used too consistently in practice; for the dribble, brilliantly used with its attending pivots and reverses, opens up more possibilities for a wide-awake offense than does any other method of attack.

This drill can be worked about fifteen or twenty minutes at each practice time without becoming tiresome to the squad. It presents

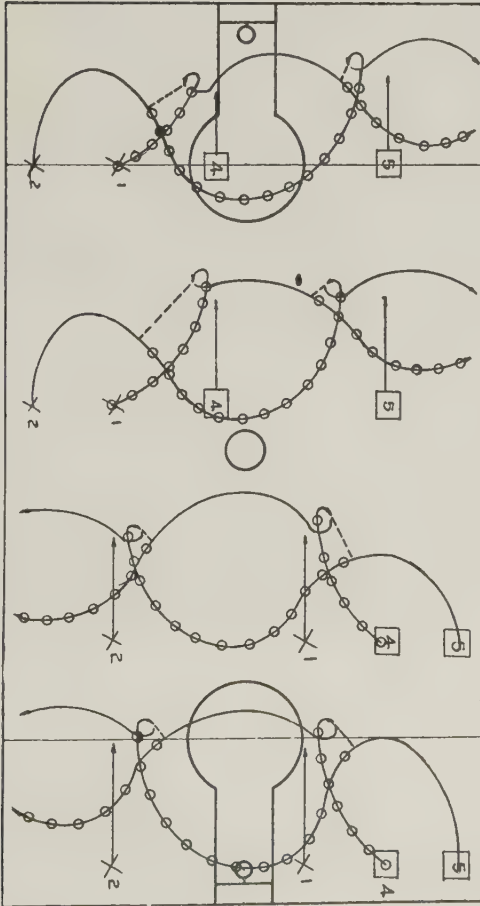
Diagram
12

the great advantage of teaching necessary fundamentals in mass drill. The large number of men involved increases the interest and raises the squad morale.

Instructions for handling the mass dribble drill: If necessary, as many as thirty-two men, or eight squads, can be worked at one time. Station the men in rank and file. Run four ranks lengthwise of the court so that each rank is twelve feet apart and the men in each rank are twelve feet apart. Each file of four men constitutes a squad and works together as a unit. The men in ranks 3 and 4 face the men in ranks 1 and 2, and vice versa. One set of men facing the same direction goes on the offense, and the other facing the opposite direction goes on the defense. The dribbler and the trailer in each file constitute the offensive pair, while the two guards constitute the defensive pair.

As shown in the diagram, in the initial move, x1 and x2 represent the two offensive dribblers, and □4 and □5 the two defensive men, who, at the start, act as obliging guards for the dribblers. Instruct these guards, in the earlier practices, to offer only passive resistance to the dribblers. But in later practices, when the dribblers grow more proficient in their execution, the guards may put up a more rugged resistance. In short, the defensive men should wait to put forth genuine resistance until the dribblers have developed

DIAGRAM 12



Mass drill formation for dribble practice.

good judgment of distance, more skillful handling of the ball, and more agile ability to shift, pivot, and reverse.

Assume that there is a side line halfway between each file. Each file executes the drill simultaneously. On the initial play, x1 dribbles toward one of his imaginary side lines and thereby pulls the guard over and away from the center of the drill floor. As the guard makes a passive attempt to secure possession of the ball, x1 pivots away and back-passes to x2, who is acting as the trailer for x1. x1, after executing the pivot and pass, reverses and becomes the trailer for x2. x2, who received the pass, then changes his direction and dribbles toward his opposite imaginary side line and continues on down the floor until forced to this side line by the rear guard. He then pivots toward this same side line and makes a back pass to x1. x1 receives the back pass and dribbles toward the side line opposite x2. x2 reverses and follows around to become trailer to x1.

With the ball now at the other end of the drill floor, the play should be reversed, and the guards should become the dribblers, and the dribblers, the guards. The execution should be continued as before. This plan of alternating the men on dribbling and guarding gives the entire squad a chance for instruction in every

phase of the dribble,—dribbling, breaking up the dribble, stopping, starting, turning, reversing, pivoting, and passing.

KEY TO DIAGRAMS

□ Defensive Player

X Offensive Player

1 Left Forward

2 Right Forward

3 Center

4 Floor Guard

5 Rear Guard

————→ Path of Player

o-o-o-o Path of Dribbler

o-o-o-o> Pivot after Dribble

----- Direction of Pass

----- Path of Tipped Ball

++++ Path of Floor Bounce

----- Path of Hook Pass

===== Shot for Goal

o-o-o-o> Pivot with Feint after
Dribble

Note: All Diagrams (except

1+2) are drawn to scale

of 1"=20 ft.

HOW TO BREAK THROUGH A SET FIVE-MAN DEFENSE

Diagram
13

Passing Lanes—Before the days of the five-man defense, there was no such thing as a passing lane. Every player was assigned an opponent to play, and it was his job to prevent this man from receiving the ball or from scoring after he had received the ball. In these days of five-man defense, playing the *position* is more important than playing the *man*. This modern trend of playing the position instead of the man has produced certain definite passing lanes along which the offense can operate with comparative success.

Many players still think of the court, merely, as a place in which to roam. In other days this was true. But now there are passing and receiving lanes as definitely defined for players on a basket-ball court as there are separate traffic lanes, designed for pedestrians and for automobiles, on a city street.

These lanes, as generally used, are created by the positions of the set five-man defense. They should be visualized on the court as they appear in Diagram 13.

In baseball, when a team is lined up on defense, the batsman (on the offense) will drive a safe hit out of reach of the defense.

In basket-ball, the passing and receiving lanes, leading from the offensive territory through the

very heart of the defense and on to the basket, are as clearly outlined for the traffic of the basket-ball offensive as are the lanes on the diamond clearly tracked for the progress of the baseball on its way to a safe hit. As surely as the batsman will hit safely if he drives the ball into one of the batting lanes, so surely will the basket-ball player pass the ball safely through the five-man defense if he works it astutely through these basket-ball lanes.

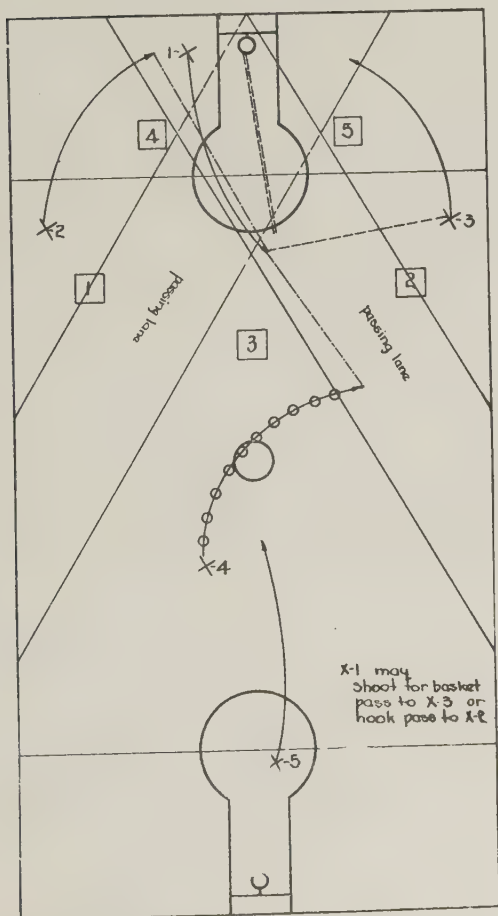
In order to craftily and successfully advance the basket-ball through these passing lanes, the offense, in working the ball down the court, must flank the defense in much the same manner as a military detail would flank a machine gun nest. In other words, when the offense is attempting an advance beyond the defense, the ball must be zigzagged or passed diagonally across the court. The basket-ball player who does not pass across the court to a team mate moving to proper position, is as much of a "jay" passer, as the pedestrian moving aimlessly across street intersections, heeding no traffic rules, is a "jay" walker.

The purpose of the player, in his zigzag passing, is to draw the men on defense out of their regular positions. Then a pivot or a floor bounce to another player who crisscrosses will enable the offense to work toward the basket along these definite passing and receiving lanes.

If an opponent should be between the passer and the receiver, the passer should not pass lengthwise of the court. This applies especially to a long pass. The reason for this admonition is, that, if the opponent should be in a direct line with the passer and the receiver and the ball on a pass should come to the side he would have to move laterally only a few steps to intercept it; or, if the ball on a pass should come over his head he would have to drop back only a few steps and leap into the air to intercept the pass. Whereas, a pass, if made across the court, would draw the opponent much farther away from his position. Then a pivot followed by a backward pass would enable the offense to smash through the position just vacated by the player on defense.

The Play—When the five-man defense is set, the dribbler (x4), by progressing laterally as if to go between □3 and □2, forces these two front rank men together. Then the dribbler (x4), rises on one foot and hook-passes into the center of the five-man defense to x1 who comes from under the basket to the center of the set five-man defense to receive the ball. In this way, the forward can retain the ball far within the five-man defense. The receiver of the pass (x1) upon alighting can either pivot and dribble toward the goal; or he can pivot, crouch, and shoot for the goal from the posi-

DIAGRAM 13
PASSING LANES



How to break through a set five-man defense.

tion where he receives the ball; or he can pivot and pass to a team mate who is in a more advantageous scoring position. If he should choose to dribble on into the basket, he could score with a one-hand english carom follow shot; or, if opposed by the guards, he could pass to x3 who has camped midway along the side line between □2 and □5; or, he can hook-pass to a team mate who has dashed from the corner to the position vacated by either guard; or, if closely covered, he might hook-pass to a player who is still in a corner position from whence a successful shot might be made, as the man in the corner will always be in an open position. This corner position, disregarded for so long, is at last finding consideration. It offers exceptional advantages to a man who uses the push shot with accuracy.

By crafty passing down these lanes, an offense can so penetrate and suck together a set five-man defense that it will suddenly find itself open for a shot within the very shadow of the basket. If, on the try for goal, the ball should miss the basket and take a rebound, see to it that the offense has the men placed in strategic positions, close enough to the backboard to be able to score.

Many other possibilities for advancing the ball to scoring positions can be developed by stressing this fundamental idea of lanes.

OFFENSIVE SIGNALS

The most simple signals are the best. If you have a center that can control the ball, five plays are enough for any team. Signals enough for five plays and their variations should not be complicated or hard to follow. If the center cannot control the ball, signals are worthless. In arranging a signal code, the tip-off lanes at the sides of center might be designated as lanes 1, 2, and 3. These tip-off lanes could be numbered from the center of the court toward the side lines, or vice versa. Divers ways of giving signals are used. In fact, the codes should be so easy to follow that the boy down in the grades could understand them.

It would be useless to reiterate the many ways that signals can be given. However, regardless of the signal code, one hand of the man giving the signals could be used to designate the number of the play and the other hand to show the receiving lane. In order to conceal the authentic signals, every man on the field could give them by raising his hands and using his fingers. This will so confuse a team watching for the opponent's signals that they would fare better by forgetting that their opponents had signals.

Or, if more than five plays are used, these additional plays can be designated by enlarging upon the hand plan—by showing the closed fists

for a smash play, and the two wide open palms for a surprise play.

It is good basket-ball strategy to try to make your enemy pay attention to your signals. This will take their mind off their game and, consequently, make them more vulnerable. It is well to have a couple of clever players call the number signals aloud while the rest of the players are giving finger signals. This stimulates the opponents' auditory senses as well as their visual, and a general confusion results. While they, perhaps, know that these are not bona fide signals, it will be difficult for them to inhibit such stimuli.

Either the forwards or the center may give signals with equal success. If the center gives them, he should not enter the jumping circle until he has finished giving the signal, as the referee can start the play the moment both jumpers are in the circle. Also, since the rule provides that the jumper when in the act of jumping must have one hand touching the small of his back, if the center used both hands to execute his signal, he might have some difficulty with violations. But, regardless of who gives the signals, they should not be telegraphed to the opponents by any movement which might reveal the authentic signal given.

FLOOR PLAYS FROM REGULAR SCRIMMAGE

Every coach has his own theory of the best style of offense. Briefly, the best style of offense is the one that will bring the most gratifying results. Few plays, complete mastery of fundamentals, and plenty of team-sense is my idea of a winning offense. The success of a season is in direct proportion to individual and team mastery of fundamentals, combined with quick and versatile team-brains. A versatile team is one that can combine at will every fundamental trick known to basket-ball. The repertoire of a winning team is as varied as is the game itself. A team, consistent in its winning, knows no limitations of strategy.

Plays are the easiest things in the world to diagram, but plays that work against good teams are the direct results of executions that have had their inceptions in fundamentals mastered on the practice floor. For this reason, I have given as much space to the outlining of practice drills as I have to the diagraming of floor plays to be used in games.

Not many goals are made against finished teams from the tip-off nowadays. Consequently, I am diagraming only the plays from tip-off that open up the greatest possibilities in throwing the defense off-balance. These plays diagramed illustrate the use of the tip-off lanes in "outfoxing" the defense.

Refer
to
Diagram
14

Tip-off Lanes—We have previously discussed the passing lanes used in breaking up the five-man defense. In this diagram, the tip-off lanes are shown. These are in no way connected with the passing lanes previously described, but are imaginary lanes, each seven and a half feet wide located on each side of center, showing the path through which the guard must travel to receive the ball on tip-off from center. (See Diagram 14 for position of lanes.) These lanes are measured off in the imagination lengthwise of the court from the outside of the center circle toward the side line. Three such lanes on each side of center take up the entire space between the center circle and the side lines. The reason for making these lanes seven and one-half feet wide is that this distance represents the man's reach. In four of the tip-off plays that follow, the center will tip the ball into one or the other of these six lanes. In the other tip-off play, the center tips the ball behind him.

COMMON FOULS AT CENTER

In any play where the center is controlling the tip-off, it is of vital importance to watch for the unscrupulous player who will devise schemes to interfere, when the center is properly placing the ball.

When a center is controlling the tip, he must be on the watch for an opponent, who may have been coached unethically, to strike his arm. This

foul method is perpetrated in two ways and always with the hope that the referee will overlook it. First, the fouling center, who is being outjumped, will, just as he arises from the floor on the jump, take deliberate aim and strike the successful jumper's wrist with his extended finger tips. By so doing, he means to destroy the center's proper tipping force, and thus to cause the ball to come down to a position where he, the fouling center, can get another chance at it,—unless he is caught by the referee. Second, if unsuccessful in this attempt, he will try either the overjumping chest interference or the corkscrew jump. In either case, he deliberately plans to strike the opponent's tipping arm with his outside forearm when both are in the act of jumping. This is unfair and plainly against the rules.

When confronted with such unfair play, instruct your center to give all the ground possible before jumping. Teach him to crowd back in his half of the jumping circle so that when he jumps he will still have space left between his own half of center circle and the other jumper. This will give the referee a better chance to detect the fouling center, for this caution observed will force him to come over into the other half of the circle in order to make contact with the center who is outjumping him.

TIP-OFF PLAY FROM UNBALANCED FORMATION

Dribbler Chest Shoves to Right Forward, Who Hook Passes for Goal

**Diagram
14**

This play is designed to offset unbalanced defensive formations, such as the so-called "Y," the triangle, or the "L." If the defense plays one forward down on this play to assist the guards, have your team use a signal that will enable the offensive guard to receive the ball out near the side line.

If the defensive forwards should play both in front of and behind center, the signal of the offensive should be to play the ball through lane 2 or lane 3.

With the signal given to go through lane 3, the right guard drives through and receives the tip-off from center. The right offensive forward plays deep in his own corner near the side and end lines. Except for two ten-foot fakes that the right forward must make in two directions, he maintains this position while his own offensive right guard is dribbling down the court. This faking maneuver toward the basket draws the guard over and thus opens a larger area to the dribbler, but he immediately retraces his steps by quickly backing into his former position and gets ready to receive a pass from the dribbling right guard if necessary. This play places a decided burden upon the defensive left guard, as there are two offensive men on him at one time.

13



The offensive left forward, after playing safe on the tip-off, and after seeing that the play through lane 3 worked as planned, reverses and cuts directly back toward and in front of his own basket to receive a pass, if necessary, from the dribbling guard.

The center, after tipping the ball, takes one step back and brings both feet together in order to prevent an opponent from blocking him out of the play. This position gives him a shifting stance which will enable him to move in either direction. However, as shown in Diagram 14, unless he is blocked off, he will cut back and circle out on the opposite side from whence he tipped the ball. This change of location places him in a splendid position to receive a back pass for a try at goal. The offensive left guard, after seeing the ball well down into offensive territory, moves over and down the center of the court. He can, if necessary, advance as far as the center circle. Admonish him, however, when his team is using the four-man offense and the ball is well down in the offensive area, to go no farther than the center circle. He must be vigilant to see that no opponent slips in behind him, because if the opponents should suddenly get possession of the ball on a long pass to a "sleeper" who has slipped in under the basket,

the work of the offensive left guard would be rendered impotent.

During the maneuvers of his team mates, the offensive right forward has been keeping his defensive guard busy, by shouting, slapping the foot, and feinting to leave the corner, either along the side or the end line. The dribbling right guard, once in position to pass, immediately uses a chest shove pass to the right forward, who employs a high arch, looping, chest shot for the basket. This corner shot is the most difficult of all shooting positions to defend; therefore, is not, as some coaches suppose, the most difficult shot to make.

TIP-OFF PLAY FROM UNBALANCED FORMATION

Center Receives Hook Pass from Dribbler and Uses Push Arch for Goal

Center Controlling Tip-off and Tipping Into Second Lane—The center's unerring ability to control the ball is the secret of successful tip-offs directed to a designated player.

Diagram
15

The Play—Center tips ball to right guard, who smashes through lane 2 and receives the ball high in the air opposite center. He starts a smashing dribble toward the side line and in the direction of the basket. Right forward is shown (Diagram 15) lined up in lane 2, ready for tip-off. He maintains this position primarily to assure the right guard's safe invasion

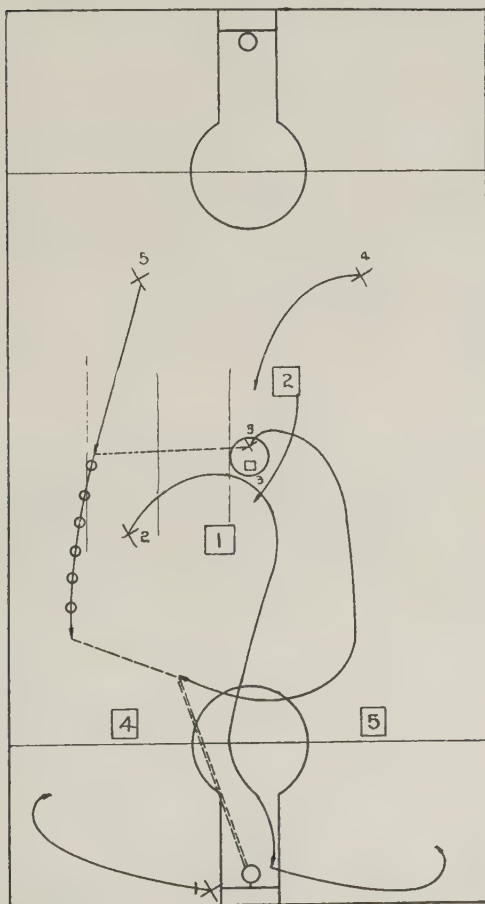
down the court; and, secondly, to recover a fumbled ball, should the play go awry. He is standing between □1 (opponents' forward) and the place where the right offensive guard will receive the ball. From this position he can easily cut in toward the center circle and thereby block off □1, who is coming down on defense; or he can, if necessary, go back on defense to aid left guard. Or, if the first movements of the play are successful, he can cut for the center circle, drive directly down the center of the court, and swing into his own basket. Here he can quickly reverse and cut out toward the opposite corner to receive a pass from the dribbler.

The left forward who has been, during the entire play, in, around and near the basket, suddenly darts for the other corner in order to draw □4 (defensive guard) off-position.

The center after tip-off must get out of the circle quickly, for he must traverse half the court in short order to figure prominently in the play. He must always, after the tip-off, leave the circle opposite the side to which he has tipped the ball. Once down the court, he (x3) feints as if to cut in behind □5, but suddenly stops short and drives off at a right angle toward the middle of the court. This places him in splendid offensive position. He now receives a pass from the dribbler (x5)

DIAGRAM 15

Tip-off Play from Unbalanced Formation



Center controls tip. Center receives hook-pass from dribbler and uses push arch for goal.

and shoots a long high arch push shot for the basket. This shot, on account of the center's position in front of the basket, gives him a chance for a rebound, should he not make a clean hit on his first try. All other players, with the exception of left guard, now smash in and smother the defense in the offensive area. x4 plays his position safely. He swings to the center of the court and is prepared to receive a back pass should the defensive team become too aggressive under the basket. This play, as well as the one previous, is planned on the scheme of a four-man offense.

TANDEM LEFT X PLAY

Tip-off Play from Unbalanced Formation

Forward Uses Long Hook Pass to Guard

Diagram
16

Conceal your intentions of "pulling" this play by placing three of your men on the strong side.

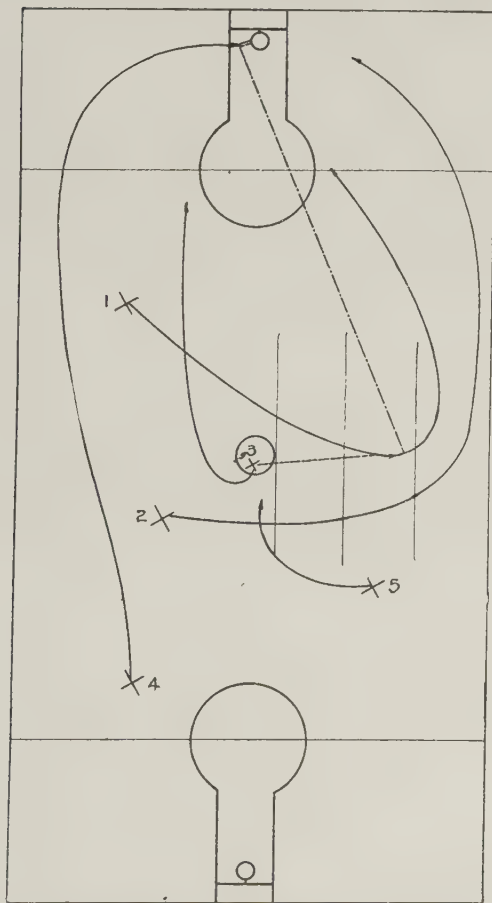
The Play—Left and right forwards line up on left side of center well up in the court. This advanced position of the forwards pulls the opposing guards farther up the floor than they would dare to come if one forward camped near the basket.

After the tip-off, the left guard (x4), by cutting wide on the outside of lane 3, hesitates just as he gets even with the center. He feigns a "balled-up" signal and slowly moves on down the court, showing little interest in the play. The left

DIAGRAM 16

TANDEM LEFT X PLAY

Tip-off Play from Unbalanced Formation



Forward uses long hook-pass to guard.

forward drives away to the right of center, catches the ball high in the air and, while in the act of landing, hook passes high over the heads of the defense to the floor guard who has arrived just in time for a set-up shot.

The left forward now circles in on a hard drive to the right of the basket so as to be in position for a returned hook pass from the floor guard.

The right forward cuts in behind center and then swings on around toward the basket to be ready to recover an over basket shot.

The center after the tip always takes one step backward to keep from being blocked off. Then, after going out of the ring to the side opposite the one from which he tipped the ball, he swings into the basket for follow up work. The rear guard should always swing to the center and down the middle of the floor.

This play is rather hazardous for the reason that but one guard is left back for defense. It is safer to pull the center back to help the guard, if there is any question as to whether or not the play will go through. However, the right forward is in strategic position to aid the defense.

SCISSORS FIGURE-EIGHT PLAY

Tip-off Play from Unbalanced Formation

Center Having Trouble Controlling Tip

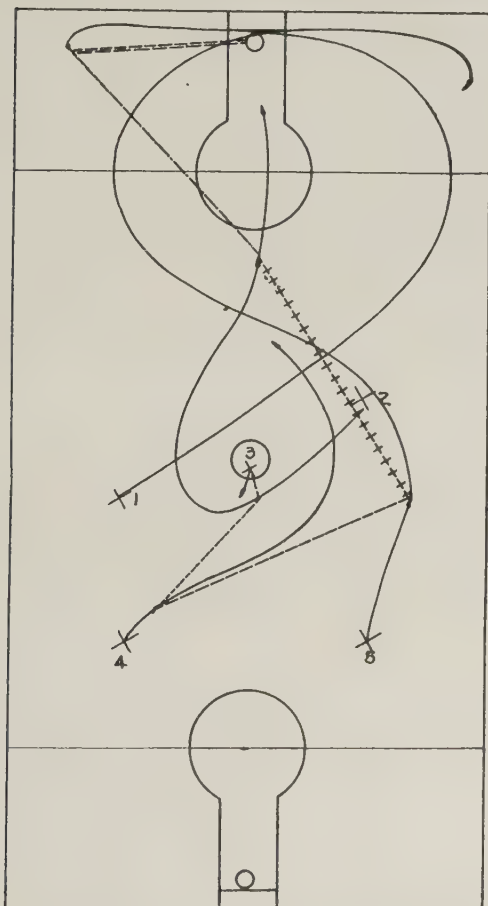
Diagram
17

In this play, owing to the uncertainty of the tip-off, the guards remain in their regular ad-

DIAGRAM 17

SCISSORS FIGURE-EIGHT PLAY

Tip-off Play from Unbalanced Formation



Center having trouble controlling tip.

vanced guard positions, which are fifteen feet from the basket.

The Play—Line up the forwards diagonally about twelve or fifteen feet each way from the tip-off circle. The forwards remain stationary until the referee tosses the ball up in the air. They then start advancing with a low cautious swing while watching the direction of the ball from the tip-off. They finish with a hard, vicious drive which is calculated to meet the ball high in the air on its descent. In this play, the offense is lined up to meet either one of two situations. They are prepared for an offense if their own center controls the tip, and for a defense if he does not. It is an offensive-defensive game.

If the center can control the tip, it will be on a corkscrew jump. If the center can tip the ball four feet to the rear, the right forward (x2), can drive through and slap pass the ball to the floor guard (x4). The left forward (x1) at the same time, can scissor to the opposite side. The floor guard (x4) can then chest-shove the ball to the rear guard (x5) while he (x5) is on his lateral advance down the court.

The center after the tip-off comes back on the defensive. The right forward (x2) after batting the ball to x4 circles and drives on down

the center of the court and receives a floor bounce from x5.

X1, after his initial scissor past the center and into the offensive zone, drives wide in circular formation toward the basket. He must be ready at all times on this drive to receive a quick pass as he goes in to the basket. He continues his drive on under the basket and over to the left corner, where he will receive a hook pass from x2. He can now crouch low and shoot a high leaping push arch or chest shove shot for goal.

X5, after the floor bounce, cuts across in front of the center circle and, following the curve of a figure-eight, swings wide, crosses in under the basket and takes the corner opposite x1. The center goes back and takes up the work vacated by x5. After x1's try for basket, x5 drives in to the basket for rebound work.

X4, after his chest shove pass to x5, moves down the center of the court to assist in the four-man offensive.

If the opponents should secure possession of the ball, the center, who has figured so little in this play, could continue on back to the defensive area to help the guards. These three men would now form a set triangular defense to halt the advance of the opponents. This triangular defense with the two guards back in their regular positions and the third

man stationed on the free throw line would assure no close-up shots and also would guarantee a quick break from defense to offense.

GUARDS-UP PLAY

Tip-off Play from Balanced Formation

Guard Using Medium Hook Pass to Forward

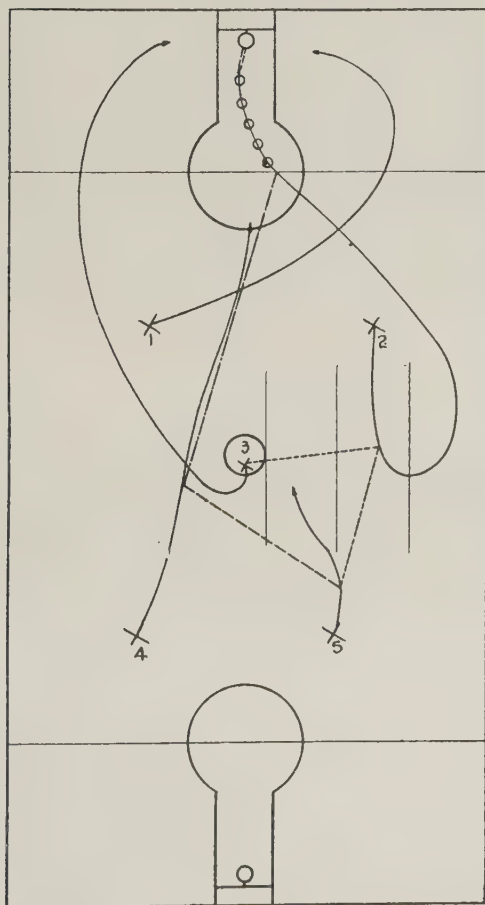
Diagram
18

When the opposition is giving trouble, it is often expedient to bat the ball to the team mate who is supposed to handle the pivotal pass. In this instance, with the center controlling tip-off, he tips the ball to the side into lane 2. x2 drives through this lane high in the air, batting the ball at its greatest height to x5. While the ball is still in the air in lane 2, x4, seeing that the play is going through as signalled, moves from his position and advances down the floor diagonally to his right about fifteen feet. At this point, x5, who is in possession of the ball, uses a one-arm snap pass to x4 in his advance position. X2, after batting the ball, reverses and cuts out toward the basket. Then, by cutting back and in toward the center of the basket, when near his own free throw line, he gets into a favorable position to receive the hook pass from x4. X1, who apparently has not figured in the play, suddenly cuts over to the right side of the court and swings in to the basket on the right side. The center (x3), after tipping the ball to the right,

DIAGRAM 18

GUARDS-UP PLAY

Tip-off Play from Balanced Formation



Guard uses medium hook-pass to forward.

takes one full step back and swings circularly to his left, rounding into the basket on the left side. At this juncture x4 hook-passes to the right forward, who dribbles in to the basket for a try at goal.

X4, after hooking, follows on down the center of the court for a back pass if necessary. x5 now swings down the center of the floor to the tip-off circle. This movement puts him in good position to receive a second back pass and to relay it, if necessary, on a long pass to an uncovered team mate.

PINCERS PLAY

Out of Bounds Under or Near Own Basket

Diagram
19

Out of bound plays present more scoring opportunities than do plays from tip-off. Therefore, it is important that teams, which have drilled on certain out of bound plays in practice, do not, in the excitement of the game, get nervous and forget to use them properly.

The following out of bound formation under the offensive basket presents untold possibilities. By using this play as a guide, you can work out fifty-six practical plays from this one formation alone. The same principle used in this play can, with slight alteration, be adapted to an out of bound side line play.

Stress upon your players the importance of using the play in the heat of the game. Teams,

in their desire to get the jump on their opponents, make the common mistake of getting nervous and spoiling the play. Many teams will work this play to perfection in practice drills, but the minute the game is on, unless they are cautioned repeatedly, will let it go awry.

Part of the confusion in working this play under the stress of the game is due to the passer's fear of losing the ball, by retaining it longer out of bounds than the allotted five seconds. To overcome this anxiety of the players when in the game, it is well during the practices to pull out your watch and count time aloud, in order that the players may estimate how long it will take for five seconds to elapse. In counting time on this play, you will find by looking at your watch that by the time you utter the words "one thousand and one" with average speaking rapidity, one second of time will have elapsed—this count approximates the lapse of one second. The count then for an elapse of five seconds should be "one thousand and one, one thousand and two, one thousand and three, one thousand and four, one thousand and five."

The passer should plan to get the ball into play between the lapse of the first and the fourth seconds. This will avert any hitch with the referee.

In this lapse of time between the first and

the fourth seconds many new situations may arise. Therefore, the passer should be cool-headed enough to pass-in cautiously. A team properly coached will soon get a clear conception of five seconds of time and will then execute this play in an orderly way.

The Play—Two men (x2 and x3, in Diagram 19) quickly get into position about twenty feet from end line (outside of which is stationed x1, the passer) and about twelve or fifteen feet apart. In this play, these two players operate in much the same manner as the jaws of a pair of pincers.

X3, on the left, gets into motion a fraction of a second in advance of x2, who is in an identical position on the other side. Then x2, who is the other lip of the pincers, starts a similar movement. X3 rushes three steps forward shouting to x1 (out of bounds) to pass to him. Almost simultaneously with this movement x2 on the opposite side does the same thing. See the lips of the pincers beginning to function.

If, at this point, either of these men should see an opening, he should drive on in to the basket for a try at goal. But if they find all openings closed for a successful pass to either of them, they stop short on their outside feet. The inside foot of each of the two advancing players should be drawn in and back, ready for a shift in a new direction. In short, these

two advancing players are in pivotal position without pivoting. Instead of pivoting, they retrace their steps, and, circling around, crisscross at the free throw line (the hinge of the pincers) with x3 crossing in front of x2. In passing each other on this crisscross, these two men describe an arc and end in the same spots from whence the crisscross was started, but in reversed order.

It is of vital importance in this play that the team members know when crisscrossing which player is to go in front and which, behind. Else the two men executing the movement might crash together and cause needless injury to one or both.

During this preliminary operation of the jaws of the pincers, x4 has adopted a watchful waiting policy. If, as yet, no favorable situations have developed, x4 drives straight for the basket, receives the ball from out of bounds, and shoots.

Naturally, a defensive man will be placed in front of the out of bound passer to prevent any set-ups by the offense. Therefore, the passer (x1), out of bounds, must quickly, yet accurately, survey the field for his best opening. All out of bound plays are very elastic, and a player must have a fine sense of judgment to feel, intuitively, the hottest point of contact. The passer upon survey may find it best to fake a

pass to the floor guard (x4) who, driving in, is trying to pull his opponents after him.

After such maneuvers as outlined—the whole of which should not consume more than three seconds—the passer, who is out of bounds may pass safely to x5, who drives on down the floor past the center circle and either takes a long underhand loop shot for the basket or passes into the corner to x1 who has circled in from out of bounds. In such an instance, x1 will probably find himself in position to take a quick push arch or chest shove shot for a try at goal.

OUT OF BOUND PLAY UNDER OPPONENTS' BASKET

Out of bound offensive plays under the opponents' basket are of less importance than are those under the offensive basket. The team on defense naturally gives ground toward the opponents' basket in order to protect the offensive territory.

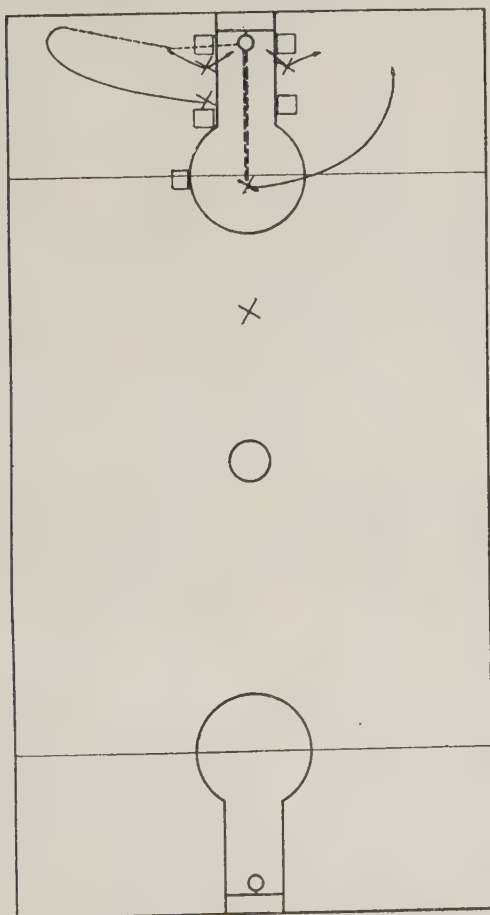
In plays of this kind, the rear guard should be the man to pass the ball in from out of bounds. The first object in such passing is to get the ball through before the defense gets set. A running crisscross pass coupled with a smashing attack and pivot is considered the best type of advance to make on a play of this kind. A long pass is, also, always justifiable if the opponents should leave an offensive "sleeper" unguarded.

But if the defense should get set in the regular set five-man way, a short pass in to a team mate should be the beginning of a strategic advance. Such an offensive position calls for a good dribbler. Deliberate approach toward the first defensive line is wise. Then a change of pace is in order. Upon approaching the first defensive line, the offensive team should quickly accelerate its drive, for it is now in offensive territory and must score to win. If the first and second attempts are futile, the offense should strive to keep possession of the ball and also to keep courageously hammering away, hitting hard and fast. Such vigorous offensive power will worry the opponents, even if it does not net a goal.

A hard fast dribbler to the right or to the left will in all probability, by pulling the defense out of position, give the offense a splendid chance to work a hook pass down one of the passing lanes. (See Diagram 13.)

If the player in possession of the ball should be rushed before getting into the passing lane, he could pivot and back-pass to a team mate who was in position to receive it. This temporary break in time caused by the execution of the pivot should give the other players on offense just time enough to escape to unguarded spots where the one most strategically located might receive the pass.

DIAGRAM 20
OFFENSIVE FOUL LINE PLAY



Using corkscrew jump for tip-off after missed free throw.

This play is outlined in a general manner on account of the shifting needs of such occasions. Specific plays for such emergencies would be as varied as are the many conditions arising from an out of bounds under the opponents' basket.

OFFENSIVE FOUL LINE PLAY

Diagram
20

It is not always good strategy to fight for positions along the foul line. A rangy agile outfit can often gain the advantage by letting the opponents choose their places along the foul lines.

By stepping in more closely behind the opponents and presenting the shoulder and back arm, an offensive player can very successfully make a corkscrew jump and tip the rebound to a team mate who may dash either to the side or to the corner of the court. Shiftiness in executing such plays is far more important than weight.

If expecting to use this play in games, it is splendid practice-drill to line up two teams—one on offense and one on defense—and to instruct the men on the offensive to deliberately miss their free throw attempts. Upon the rebounds, drill the men in the correct way to recover the ball after a missed free trial for goal—simulating game conditions.

CHAPTER V

Team Defense

EVOLUTION OF DEFENSIVE PLAY

The common conception of team work is that it applies only to the offense, when, in reality, team work shows at its best on the defense. This misconception can be attributed to the fact that in the early development of the game the players in possession of the ball were the centers of attraction while very little thought was given to the players who did not have the ball. All efforts were placed on scoring, and no attention given to the work of preventing the opponents from scoring.

When choosing the players for a team, the ability of a man to score was the deciding factor. All men had to be offensive players in order that the team might win. Offensive work was primary while the work on defense was secondary.

The results of experience have changed these conditions until now the two phases of the game are given equal consideration; and in many instances their order of importance has been reversed. The offense has yielded to the relative importance of the defense very miserly and reluctantly. At first, only one player was assigned to defensive duty, leaving four men solely for scoring purposes. This one man assigned

for defense was chosen not only because of his qualifications as a guard, but largely because he could not score. This shows the emphasis placed upon scoring, as well as the reluctance of the offense to concede to the defense their equal share of credit in the team play.

Later, in the next step of the evolvement of the defense, two men were used on guarding duty while the other three players were assigned to offensive work alone. Soon, two were found to be insufficient on defense so later three were used. Then the three-man defense gradually gave way to the four, and finally to the five-man defense of today with its different variations of execution.

This inevitable change from the shifting to the set or massed five-man defense has been made necessary through the gradual changes in the rules—particularly those pertaining to personal contact and guarding—and through the speeding up and complicating of the offensive play. The later teams found, with the scoring powers of the two teams equal, that in order to win they must not only retain possession of the ball as much as possible; but must also, when they lost the ball, develop means to prevent their opponents from scoring. Now, the deciding factor in the score of a game is often not so much in the difference of the scoring power

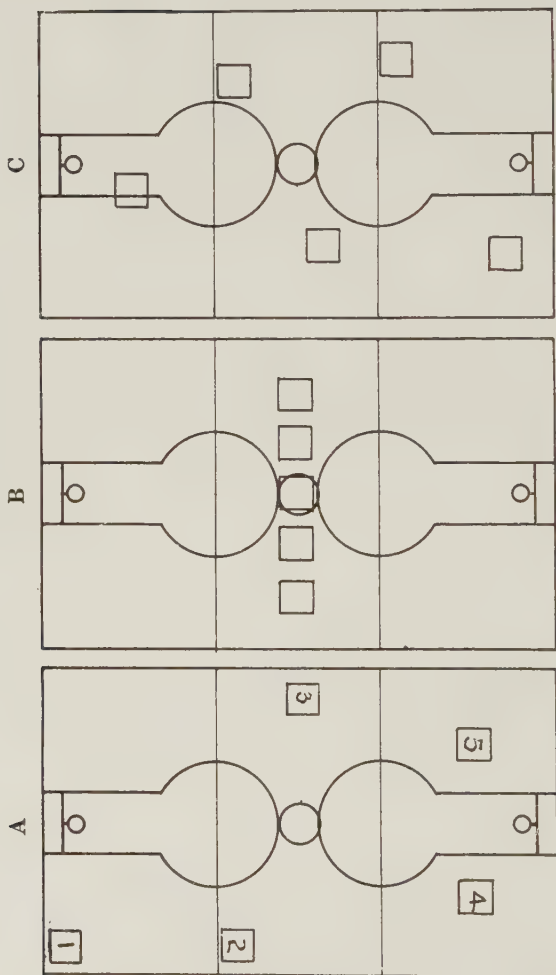
of the teams, but in the difference of the effectiveness of the defense of the two teams.

For this reason, *defense* in basket-ball has had a consistent evolution and has really advanced more markedly than has the offense. This rapid evolution of the defensive strategy of basket-ball since its origination can be divided into six definite stages, namely: (1) the old style shifting man-to-man defense; (2) the five-man one-line defense; (3) the two-man set and three-man shifting defense; (4) the three-man set and two-man shifting defense; (5) the four-man box with one-man shifting defense; and (6) the five-man two-line set or mass defense.

It is not intended to convey the impression that each style of defense, in its evolution, has marked a complete abandonment of the previous style, for this is seldom true in the history of the evolution of anything. There is usually a gradual merging and overlapping from one stage to the next. However, the various evolutionary stages do show the drift from a no man defense, in which all play was offensive and all players were expert scorers and unskilled guards, to the five-man defense, in which all players must be equally versatile on offensive and defensive play.

It is still possible to find styles of defense in use which were in vogue many years ago, but the general tendency has been to adopt some

DIAGRAM 21



Representing first three steps in evolution of basket-ball defense.

form of the five-man defense and to abandon the earlier defensive plans.

THE OLD STYLE SHIFTING MAN-TO-MAN DEFENSE

First Defense Used in Basket-ball

In this type of defense each player was responsible for one opponent. The moment the offense lost possession of the ball, each player, now thrown on the defensive, picked the opponent to whom he was assigned and for whom he was responsible and followed him closely until the ball had been recovered. Usually the center guarded the center; a forward played his guard; and a guard covered his forward. It will be seen that this paired off the players and tended toward individual play rather than toward team work. Although, there was a certain amount of co-operation between players, in that one player might leave his opponent for a team mate's opponent whenever the conditions seemed to indicate such a shift. This step was the first indication of bringing five players into the defensive work and gave evidence of a complete break-over in favor of the relative importance of team defense.

Diagram
21-A

This old style of shifting man-to-man defense is still used by some teams. But it requires a team of seasoned brainy players to execute it successfully, because of the clever work needed to constantly stay with an opponent as he

maneuvers about the court. This style is most effective against a team composed of individual stars or "old heads" who do not co-operate well in offensive team play but depend almost entirely upon their individual initiative and skill to dribble, sidestep, and pivot—thereby evading opponents and working the ball into the basket.

Against a team using the crisscross, shifting, revolving type of team defense that is so prevalent today, the man-to-man defense could not operate for the reason that the players executing the new style of offense were constantly changing directions so as to draw the defense out of position. This fact made it practically impossible for such a defense to stay with its men; and even though the defensive players could stick to their men, the extra exertion required to chase-about all over the court would exhaust them in a short time. Out of this necessity evolved a form of defense to offset these new tricks of the offense. This first step in the defensive evolvment was the five-man one-line defense.

THE FIVE-MAN ONE-LINE DEFENSE

Second Stage of the Evolution

Diagram
21-B

By using the man-to-man defense, the players could neither stick to their opponents nor prevent them from reaching the goal with the ball. As a result, the idea of building a wall

across the court to prevent the offense from breaking through was devised. This wall was established out beyond the center circle so as to make it practically impossible for the offense to get a scoring shot across it.

In this style, the defense, upon losing possession of the ball, formed a line across the court, as shown in Diagram 21-B. The players were equally spaced, and their line extended the full width of the court. Their idea was to stop any passing formation from going by or through this wall, with the ball. This plan might be likened to the goal line defense in football—a defense which is difficult to go through but easier to go over. The offense, in order to break through into scoring territory, had to break the wall. When the offense got behind the defensive wall, the ball was passed over. Each offensive man that broke through the defense was covered by his nearest opponent or by the defensive player who was assigned to him. Once through the wall, this style reverted to the old man-to-man defense, but in many ways it was worse. If the offense worked straight down the court, no trouble in guarding was experienced; but when it crisscrossed, zigzagged, circled and pivoted, the players on the defensive found themselves blocking each other in their attempt to cover their opponents.

Out of this experience of inadequate guarding came the second step in the evolution of basketball defense. When the players in this five-man one-line defense saw that they must drop back near the goal to put up an adequately strong defense to the offense, they realized the need of stationing men back, solely, to guard the basket. This was the first indication of the necessity of using players for strictly defensive work. The two-men set and three-man shifting defense was the outgrowth of this need.

TWO-MAN SET AND THREE-MAN SHIFTING DEFENSE

Third Stage in the Evolution

Diagram
21-C

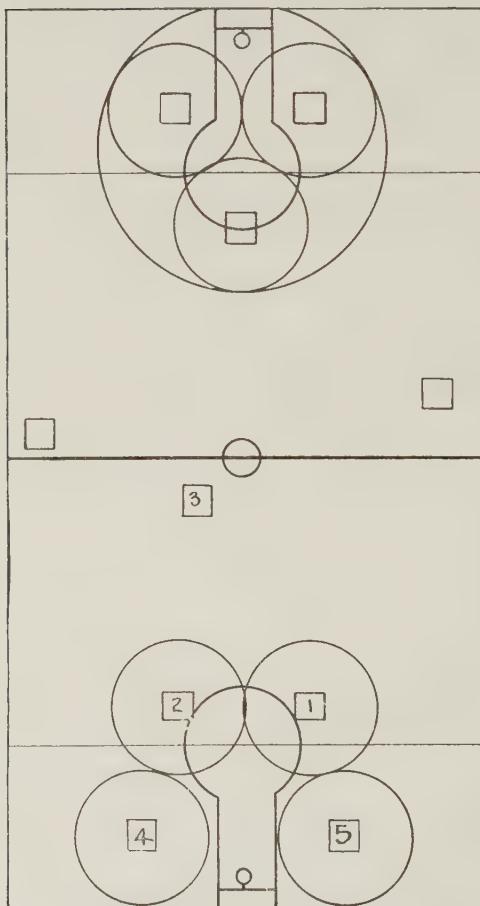
In this style of defense, the two positions in the diagram shown on either side of the goal are for the defensive players. When their team would lose possession of the ball, they would retire immediately to the positions shown. Their work was strictly defensive. In no case were they supposed to advance far beyond the center of the court, and any attempts that they would make at scoring were from long shots. It was their job to protect their own basket while their three team mates would carry on the offensive work. It was the paramount duty of the guards not to allow an opponent to get between them and the goal.

The position of these guards when they were set in this style of defense was from seven to

ten feet from the end line and from fourteen to twenty feet apart; and each guard stood equidistant from a line parallel to the side lines and dividing the court in half. (Note positions on Diagram 21-C.) These guards were to be responsible for the territory directly in front of them, between them and the side line, between them and the end line, and half of the territory between each other. Their three team mates, when not in possession of the ball, assisted these two defensive men by picking an opponent and guarding him as he advanced toward his own basket. However, these offensive team mates were always ready to dart back toward their own goal the moment the ball was recovered from the opponents. Still the defensive play was found to be faulty, and the search for a perfected defense went on.

This type of play was found to be weak because the guards were required to cover too much territory. The offense found that, by sending a player down each side of the court for the guards to cover, the center territory in front of the basket was left unguarded and was an ideal position from which to score. This weakness proved the inefficiency of a two-man defense. Basket-ball defense needed a player to guard the zone in front of the basket, and thus there developed the fourth step in the evolution of the five-man defense.

DIAGRAMS 22-A, 22-B



Representing fourth and fifth stages in the evolution of the defense.

THE THREE-MAN SET AND TWO-MAN SHIFTING DEFENSE

Fourth Stage in the Evolution

This style of defense, shown in Diagram 22-A, is indicated by circles representing the defensive territory for which each of the three men who were set was responsible. So long as the three men remained set within their respective territories (smaller circles), the twenty-eight-foot circle was very well protected. But if they moved out of their zones (indicated by the circles) to protect their goal from long shots, their opponents would have an opportunity to slip in behind them for short easy shots. There was also a tendency on the part of the guards to follow their opponents who charged through one zone into the territory of another defensive zone and by so doing would give the offense an opportunity for close-up shots.

Diagram
22-A

When playing this style of defense, the other two players were free to shift about for open spaces from which they might receive passes when their team recovered the ball. But it was not long until the need for a still tighter defense was apparent.

Three-man Shifting, Two-man Set Defense Gives Way to Fifth Step in Defensive Evolution

—In order to extend the defense farther out toward the center, to reduce the territory that each player must cover, and at the same time

to make the circle of defense about the basket still tighter, a fourth man was called back to the cause of the defense—thus leaving only one player to shift about the court to the unguarded spots and to be ready to receive long passes from team mates. This plan of defense came to be known as the four-man box defense.

THE FOUR-MAN BOX DEFENSE

Fifth Stage in the Evolution

Diagram
22-B

This style of defense is shown in a typical form in Diagram 22-B, which is drawn to scale.

In this form of defense, the two guards □4 and □5 always played back. Seldom did they go past the center of the court except to receive a pass for a long shot. In such case, one guard stayed back while the other went up. In no case did the rear guard let an opponent play in behind him. Note in the diagram the position of the guards when thrown on the defensive. The moment possession of the ball was lost, the guards would drop back to these positions. The forwards would hurry back to the positions shown by □1 and □2.

As the opponents would bring the ball down the court, the first two men who went through the defense were covered by the two guards, and the next two, by the defensive forwards. The forwards, as they rushed back to their defensive

positions, might each "pick up" an opponent and stay with him until the ball was recovered.

The fifth defensive man usually stayed back to guard the shifting center, who remained in the territory of his own goal. Thus, with this type of defense, a four-man offense was all that was possible. The defensive center was usually chosen for the back court work because of his range and height. When his team mates recovered the ball, if he was unable to get far behind the player guarding him, he would come up the court to meet all passes made to him and would then either turn and shoot or pass to one of the defensive forwards who had rushed down the court.

This type of defense was used quite generally as late as 1919 and still is used to some extent. For instance, some teams who use the five-man defense advance one player—usually the one opposite the side where the strength of the offense appears—so that when the team on defense recovers the ball this player in advanced position can dash quickly for his own goal and into a position from which he can receive a long pass, or can come back up the court to meet the ball and be ready to pass to an open spot.

Four-man Defense Gives Way to Next Step in Defensive Evolvemcnt, the Five-man Defense—
The four-man defense gave way to the five-man

two-line set or mass defense, principally because of the continued development of the zigzag, crisscross, and the revolving plans of offense. The floor space that four players were required to guard was too great a handicap for the defense to be able to meet the new offensive developments successfully, even though a four-man offense was all that was possible against this defense. On narrow courts, the four-man defense can still be used effectively.

THE FIVE-MAN TWO-LINE SET OR MASS DEFENSE

Sixth and Final Stage in the Evolution

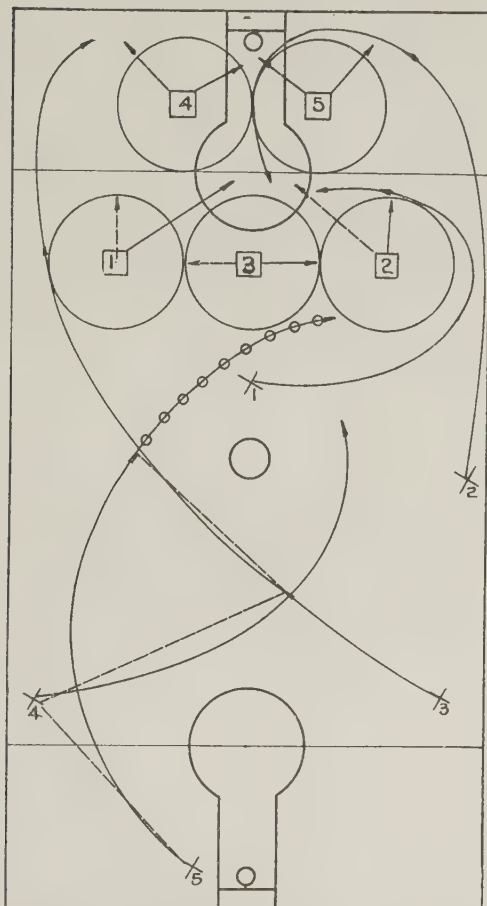
Diagram
23

The advent of the five-man two-line set or mass defense marks the full submission of the adherents of offense only to the importance of a strong defense. It also marks the beginning of an impenetrable defense which is the beginning of the greatest perfection in defensive play.

This diagram shows the general set positions for the five-men defense as practiced today. Most all successful present-day defensive methods are variations of this formation. Many coaches place their primary wall out to the center of the court and advance the secondary defense proportionately. The reason for this advance of the two defensive lines is to prevent any possibility of a shot over them and also to meet the offense before it has had time to form.

DIAGRAM 23

SET FIVE-MAN TWO-LINE DEFENSE



Fundamental diagram for the many variations of the massed five-man defense.
Last stage in the evolution of the defense.

The defensive lines should be so far out toward the center of the court that scoring shots over them will be of small percentage. The greatest danger to which the defense is subjected from this type of formation is that the offense will send men behind both defensive lines and then pass over them; or that the offense will draw the secondary defensive line back by sending two men through and then pass over the primary line to a player who has slipped behind it.

VARIATIONS OF FIVE-MAN DEFENSE

(1) *General Type*—Another method of playing this style of defense is to have the center who is in the front defensive line drop back between the first and second lines of defense, thus strengthening the area around the basket, from which most goals are scored. This really forms a three-line defense. This formation has many strong points, one of which is that it strengthens the center of the regular formation, as shown in Diagram 23. This center position is always considered the weak spot in such a defense. When playing the defense as it is shown in this diagram, it is very easy to fall into such a three-line formation and to meet many styles of offense directed at the middle of the defensive wall.

(2) *General Type*—Another variation of the five-man two-line set formation is arranged by

placing the second line closer to the front line and the center player behind both these lines and at a distance of not more than seven feet from and directly in front of the goal. In each of these two above-mentioned formations, the two outside players in the front line move close enough to the center of the court for their floor positions to divide the court longitudinally into thirds. This latter method of lining up the defense with the center player behind both lines is not so formidable as the preceding method with the center player between the lines for the reason that the center of the formation is left somewhat weak and the corners of the court are more open to attack.

Due to the fact that the variations of this defense, both in court positions and in the movement of the players, is so similar to the formation itself, Diagram 23 only, will be used to discuss the different phases of this set five-men two-line defense.

In such a formation, the three players out in front are called the primary line; and the two in the rear, the secondary line of defense. The players in the front primary line are usually the two forwards on each side, with the center between. This order may be shifted, if desired, to strengthen the defense. The key man is the center player. The players in the back, or secondary line, are usually the two guards. This

five-man set defense operates by two general methods. One is a variation of the man-to-man type of defense, and the other is the zoning method of the five-man defense.

The Man-to-man Type of Five-man Defense
—In this style of the five-man defense, when two opponents break through the first line, they are covered by the guards as long as they are behind the primary line. This leaves the three players in the front line to cover the three players remaining on offense. One of these offensive players does not dare to come too far toward his own goal, so that in reality two players on offense pit themselves against three on defense. This is now, due to the development of the game, a necessary advantage in basket-ball.

The general plan of such a defense is that the front line of defense blocks the player with the ball when he advances within from three to six feet of that line. The front defensive line accomplishes this aim by surrounding the man with the ball and crowding him to the side lines and out of bounds, or by blocking his avenues of passing and escaping in order to get a held ball. Each team then has an equal chance for possession of the ball.

An example of this type of defense follows. The player with the ball has advanced to a point near forward □1. The center □3 comes over toward □1 and slightly forward, so that an

attempt to go around him or between □1 and □3 will be blocked. Player □2 at the same time comes forward and over to the same side of the court to complete the blockade. □2 must be careful not to advance so far out and toward □1 that he will not be able to intercept any attempted pass back of him or to the side of the court that he has just vacated. This blockade now leaves the pivot and back-pass as the only avenue of escape for the man with the ball. Even then, by clever work on the part of □3, this move can be anticipated and the ball intercepted.

If the offense should succeed in getting out of this pocket by passing to the back court, the defense would take its original position preparatory to the next advance. If the attack should now come down the center of the court, the players □1 and □2 would close in toward □3 and advance as before to surround the player with the ball—at the same time exercising care not to leave sufficient space between them and □3 for the offense to break through.

When the ball has been intercepted, a quick dash down the floor by the players who are nearest the goal will often put the ball in good open scoring position before the opponents have had time to break from offense to defense. Here in this rapid break-over from offense to defense lies the story of the score of many a game. Let

it be borne in mind throughout all discussion of these various forms of defense that their attempted executions are worthless without calling into play every perfected fundamental of individual defense as well as every possible advantage of footwork and headwork, for the rapid break-over from one to the other.

Zone Method of Five-man Defense—The other general method by which the five-man defense operates is the zone method. In this style of play, each player has a certain territory for which he is responsible. These individual territories are shown by the fourteen-foot circles around each player. You will note that a few areas are shown to which no player is assigned. The guards are responsible for this territory between their zones and the side line as well as for the corners of the court nearest their zones. It is assumed that an opponent shall be covered by the player into whose territory he first enters until the opponent has entered a team mate's zone. Note that the zone lines of one player are tangent to those of another. In this fact lies one of the weaknesses of this system, for the reason that two players may at times guard the same opponent and thus leave portions of their zones dangerously open to attack. Another weakness of any defensive zone method is that one defensive man may have two opponents to cover in his zone at the same time. The player

in such case is forced to jockey his opponents as best he can, always remembering to keep between them and the goal.

Elastic Band Method of Offsetting Weaknesses of Zone Defense—Many of these faults can best be offset by correct and carefully timed shiftings of the defensive players. These conjoined movements of such a defense in action look very much as if the players were encompassed by an elastic band which is pulled with each shifting movement of the defense into a lopsided formation. A more detailed discussion of this elastic band defense follows: The defensive men always take the positions on the floor indicated by the squares on the diagram. Assume that a heavy elastic band—the tension of which, with certain reservations to meet emergencies, is always a constant—is drawn around the five players. Assume, further, that each player is fastened to this band so that he cannot roll or slip along it. Now, when one player moves, the resultant direction of the others is fixed. Regardless of the place at which the offense thrusts, the defense moves conjointly and simultaneously to meet it.

This defensive band swaying back and forth as the tide of offense surges against it, then receding and surging again, is not unlike the children's game of "Bull in the Pen," wherein the circle, formed by the children interlocking

their hands, sways and changes as the player (the bull) on the inside of the ring tries to break through to get the man who is, according to the rules of the game, stationed outside the ring.

Refer
to
Diagram
23

In order to continue the discussion of such a defense further, assume for the moment that Diagram 23 is a typical offensive formation. In such a case, let us also assume that the ball has been passed from the other end of the court and worked to the new position shown for x5, which is in front of and to the right of the defense. Players x2 and x1 have reached the positions shown, just as x5 reaches his new position with the ball. The defensive forward □2 follows the two offensive players x1 and x2 to the rear of his zone. The defensive guard □5 moves back with x2. This movement draws the other defensive players, □3, □4, and □1 in the directions indicated by the solid lines. The position of the ball is always considered the strength of the offense, and all players move in its direction. □3 is in a position to harass the player with the ball. □2 can cover x1, and □5 can cover x2. X3, after passing the ball to x5, moves to one of the positions on the court shown by the arrows. Because of the distance of x3 from the player with the ball and because of the direction that the pass must take with respect to the defensive players □1 and □3, a pass to x3 may be easily

intercepted; therefore, he is not a dangerous opponent in his present position.

Now, if x_1 should continue in the course shown, $\square 2$ would follow him to the edge of his zone, where $\square 1$ would pick him up and follow him while he was in this zone. Then, should x_2 continue across the court to a position under the basket where he would suddenly dash to a spot behind the original position of x_3 , he would be followed by $\square 5$ until $\square 2$, who has remained at the back of his zone, could cover him. Thereafter, $\square 5$ would again drop back to his original position. If x_3 should continue around behind or on past $\square 4$, he would be followed by this guard until he left the zone. If the point of attack suddenly should be changed by a pivot and a pass back from x_5 to x_4 , the direction of the defense would be reversed, as shown by the dashed lines with arrows.

By the use of movements similar to the foregoing, any offensive situation can be met and usually mastered. But the defense, in executing such plays, must remember to move so that it is always balanced and ready to change its direction, to feint and jockey the opponents, and to worry the player with the ball. A good defensive man knows just when to thrust out his arms and yell, or to slap his feet to the floor and feint an attack. By perfecting all guarding

fundamentals, by employing every legitimate guarding trick, and by mastering every defensive movement of team play, any present-day defense can make it very difficult for an offense, no matter how brilliant, to succeed in getting enough baskets for a winning score. A heady, determined team playing a five-man defense can so bewilder an offense that it can, almost without exception, turn the tide of victory.

However, this zoning method of defense is very difficult for novices to execute. It requires much team experience, and is very unlike the man-to-man variation of the five-man defense, which requires less team training to play it. Players cannot be thrown together in this zoning method and be expected to work smoothly at first. They must accustom themselves to their surroundings and to one another. Developing defensive players to the point where they can so feel their surroundings that they move as if tied together, is indeed tedious work. Success in such work can be attained only by diligent and repeated practice of setting the defensive men in their positions and giving the ball to an offensive five which will try by any fair means to penetrate, to pass over, or to shoot over, the defense.

HOW TO TEACH A FIVE-MAN SET DEFENSE OR ITS VARIATIONS

Perhaps the best way to teach this plan of defensive play is to start with the lines of defense back close to the goal. Put the guards only a few feet from the end line and the defensive forwards and defensive center on a line even with the outer edge of the foul circle. Instruct the offensive team that, for the present, it must not shoot over the defense but must work through it, if possible. As the defensive players become accustomed to their set positions, gradually move them out until they are able to guard the full territory, as shown in Diagram 23. When the various defensive men learn to play their own individual positions well, let them exchange positions with each other, so that they may become accustomed to playing every possible defensive position on the court, and so that you may be able to correctly place the best possible combination on defense.

Another method of developing this defensive style and one that can be worked well with the preceding method, is to place the offensive team in different possible positions on the court and then direct the defense to set itself to meet these conditions. Such work can be supplemented by blackboard chalk talks and diagrams. Players coached in this manner will gradually learn to *feel* their positions and will know just how close

Refer
to
Diagram
23

to play to an opponent in order to cover him, and just how much jockeying and feinting to do in order to scare the offense out of its zone. One fundamental defensive principle must always be followed; that is, a player should always keep between his opponent and the goal that he is guarding.

To add further to the discussion of how to teach a versatile defense, three different possible court positions are taken up for treatment of their defensive phases. These three possible court positions to be discussed are (1) falling into defense after losing the ball, (2) defense after a shot for goal, and (3) defense when the offense is playing for time. Follow Diagram 23 for most of this discussion.

Refer
to
Diagram
23

Falling Into Defense After Losing the Ball— The method of falling into this defensive formation is as important as the defense itself. In Diagram 23 if the team which is set on the five-man defensive plan should be thrown on the offensive, players □1, □3, and □2, on account of their floor positions, would carry the brunt of the offensive work, while the guards □4 and □5 would play the back court game and attempt only long shots, one guard always playing back of the other. However, the guards might alternate positions if each should be capable of doing equally good floor work. The rear guard should never allow an opponent to get behind him. This

rear guard is in fine position to direct the team play, for he can see the movement of all players and is in position to diagnose every situation. If at any time, while this team is on the offensive, one of the guards should go all the way down the court or drive through for a shot, one of the forwards or the center must immediately fill the guard's vacated position.

When this team loses possession of the ball, it must break quickly from offense to defense. Almost simultaneously with the loss of the ball, the two guards should drop back, one at the free throw line (unless there is already an opponent behind him), and the other one (the floor guard) six or seven feet directly in front of the rear guard. These players should stay this far out in the court and this distance out of regular position in order to slow-up the offense as much as possible until their team mates can fall back on defense. As the offense advances to meet these two guards, the rear guard should cover the first man down into his own offensive territory, and the floor guard should take the second player who will be farther out in front. They should not cover these players in a man-to-man fashion. but should jockey them and feint at the player with the ball in order to confuse the play as much as possible. If the guards can stop the advance or slow it up for a time, the center and the forwards will be able to

get back on defense before the play gets too far down the court. If both guards should be drawn over to the same side of the court, the first defensive man who comes to their rescue should fall into place on the opposite side of the court. As soon as the defensive forwards and center drop back on defense, the guards should get into their regular positions. In this situation and all others similar to it, the guards should form the front line defense and hold it until they are forced back in order to keep between the offense and the goal, or until they have been reinforced by their team mates.

The point for teams to keep in mind in situations similar to this is that □1, □2, and □3 should not give up and fall back on defense the moment they lose the ball. Too many teams do this and lose many opportunities to recover the ball and to make a try for a goal. The whole front line, or primary defense, should begrudgingly give ground while falling back. They should pick up a man as they withdraw to their end of the court and make an attempt to intercept the ball as the offense advances. Many players, the moment they lose the ball, will pass by the offensive player with the ball without even trying to get it, their whole thought, once possession is lost, being to reach their position in the defense formation. Often an unexpected underhanded cut at the ball will knock it from

a player's hands. "Don't give up the moment the ball is lost," is a good slogan to follow. Possession of the ball is everything; the team should fight for it always.

Sometimes when a team loses possession of the ball, it so happens that neither the forward nor the center are back on defense even after the offense has advanced far into defensive territory. In such a case, the two men who are in the front defensive line must cover the three zones as best they can until their team mates get into position. The guard on the side which is thus weakened should play out into the court farther than is customary until the delayed player gets back into his zone position. In this type of defense, the defensive team should, as nearly as possible always keep the primary line of defense intact in order to prevent any unmolested advance toward the basket. At the same time, no opponents should be allowed to slip in behind the defense for a set-up shot under the basket. When the defense is not complete with all five players in position, only clever jockeying and feinting will keep all zones equally strong against attack.

Defense After a Shot for Goal—After a shot has been made, the guards should immediately close in on the basket and be ready for rebound work or for blocking all attempts at follow shots. The defensive forwards should quickly turn

toward the basket and drop back to a position inside the free throw line so that they can intercept any tip out to a corner or to any point back of the guards. The defensive center should turn and cover the zone directly in front of the basket. This position would be anywhere from inside the foul line to a few feet from the basket. It is the defensive center's duty to block any player coming down the middle of the court who attempts a follow shot, and to recover any rebounds directly in front of the basket. This defensive play really means that the five-man defense is drawn back close to and facing the basket. It is a compressed five-man defense.

Many maintain that no such thing as a five-man defense exists after a shot is attempted, but that every player should cover an opponent until the ball is recovered or until the ball has been passed out and another advance started. In this latter case, the regular defense would again form. This plan of every player covering an opponent after a try for goal is perhaps as good, if not better, than any; for when the defense is drawn in so close to the goal, there is a tendency, if zone work is adhered to, for two players to guard one man; or else for these two players to hesitate, each thinking that the other will cover the offensive man. This blunder will occur in defensive zone work in spite of coaching and in spite of the insistence that no player

should wait for someone else to do work that he can do for himself. Whether both players rush in to the same man or whether they both hesitate, an unguarded shot is often allowed.

If every man should pick an opponent after the try for goal has been made, there would be no danger from unguarded shots. This man-to-man defense in such situations as this under the basket, is especially easy to execute as the players are limited in rebound work on account of the small playing space into which they are crowded.

Defense When Offense Is Playing for Time— The set five-man defense is of no use when a team is behind. The defense must now go out and get the ball. The offense will hold the ball in the back court just as long as it possibly can without making an attempt to advance. In this case, as many players should go out after the ball as there are opponents in the back court. The remaining defensive players should cover, man-to-man, the opponents who advance toward their own goal. The defensive men who have gone out after the ball must cover all opponents in the back court. They must also attempt to get a held ball, or to intercept a pass, or to crowd the man with the ball to the side lines and force him out of bounds.

The moment a defensive team begins a back court game, the following procedure should be

followed: The defensive players who advance to force the play must work cautiously and proportionately, aiming to cover all opponents at the same relative time. They should advance in a crouched well-balanced position, with feet apart and arms extended at the sides, so that they are in good position to make the most of every opportunity to get the ball and are, at the same time, in strategic positions to drop back with any advance that the offense might make.

SPECIAL DEFENSIVE SITUATIONS

Many other situations for which the five-man defense is not applicable must be met; namely, the defense at the tip-off when the opponents control the tip; defense when the opponents are making a free try for goal; defense when the opponents are awarded the ball out of bounds at the end line near their own goal, at the end line near the opposite goal, and at the side line inside the scoring zone and outside the scoring zone; defense after a held ball in the opponents' own goal zone and outside the opponents' goal zone. Each of these various phases of defense require special defensive treatment outside the realm of the five-man defense.

DEFENSE AT THE TIP-OFF

At tip-off, when the tip is being controlled by the opposing center, any signals or offensive plays that the other team might have will be useless. Under such conditions, any attempts that the team which is being outjumped might make to use signals would be worse than futile because the opponents and the zones would be left unguarded and the opponents could score with ease from the tip-off.

The team whose center is being outjumped can follow either of two courses. It must either surrender the tip altogether and line up in defensive position to prevent the opponents, after they

have taken the ball, from scoring; or it must place its players in such positions that they may fight for the tip, even though the opposing center is tipping the ball and controlling its direction.

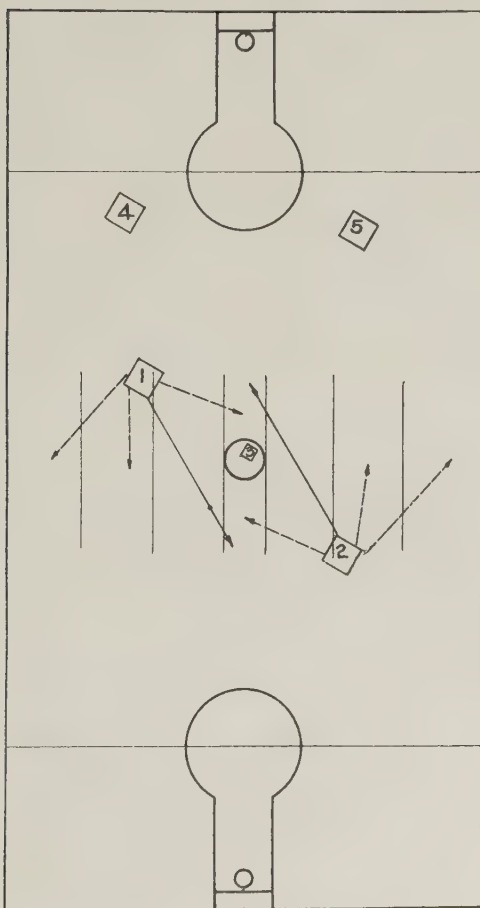
Any number of defense formations may be taken at the tip-off. It is the intention here to give only a few of the more fundamental formations from which any number of variations may be made. For convenience in distinguishing one formation from the other, the following names, suggestive of some figure formed by the play, have been used, namely, "The Scissors Defense," "The Funnel Defense," and "The Trapezoidal Box Defense." In the discussion of these three defensive formations, it is assumed that the opponents in each case control the tip.

The Scissors Defense

Diagram
24

In the scissors defense, the positions of the players are shown in Diagram 24. This defense takes its name from the shearing effect that the lines of action of the two players on the opposite sides of center would have, if they were forces. Players □1 and □2 (the defensive forwards) should be placed in such positions that they will be able to cover all of the general tipping lanes on their side. Also, they should be in position to meet all opponents driving in on tips at an angle rather than in a direct line. The positions,

DIAGRAM 24
THE SCISSORS DEFENSE



Defense when center is being out-jumped
at tip-off.

as shown in the diagram, are designed to meet these requirements.

Usually the tips come on either side directly or obliquely in front of and behind the center, and about four feet from the center circle in the first tipping lane. However, a center who is easily controlling the tip, may tip the ball to good advantage into one of the two outer lanes on either side of the circle. The heavy lines indicating the directions of players □1 and □2 show the usual lines of attack of these two players and are the lines from which this formation derives its name. Player □2 covers the front oblique, rear oblique, the side tips in his part of the court, and the back tip. Player □1 covers the front tip, the rear oblique, front oblique, and side tips in his defensive area. These two players must time their dash for the ball a fraction of a second slower than their opponents' start, so that they may judge the position of the tip if they have not previously been able to solve this.

In breaking up the tip, the defensive men have either of two courses to follow. They could either spring for the ball, or they could meet the opponent just as he comes to the floor and attempt to get a held ball. If the opponent should bat the ball instead of catching it, then players □1 and □2 would be forced either to attempt to beat them to the ball while it is in the

air or to intercept it by outguessing the opponent in determining to which court position the ball will be batted. When going after the ball in the air, the defensive forward must drive hard in order to protect himself against the force of his opponent. He must spring into the air and extend one arm high so as to outreach his opponent, and thus obtain the ball. By half-turning in the air after recovering the ball, he can evade an opponent, thereby preventing a held ball.

The dash lines shown on the diagram are possible positions for players □1 and □2 to cover for other tips when their direction is anticipated. You will note that the position of the players from these dash lines are about equidistant from all of these points. The center in this play should, after the tip, step back and to the side to which the ball has been tipped in order to aid in any way possible in breaking up the opponents' play. If the opponents have secured the ball, the center can advantageously drop back to a defensive position. The guards □4 and □5 should play back to stop any try for goal directly from tip, and, also, to guard any opponents in the back court. The exact position of the guards will be governed by their opponents in the back court. They should always keep between the opponents and the goal. In no case should the guards advance farther

than half way between the goal zone line and the center circle.

Should the opponents get the ball from the tip, player □1 continues to the defensive position of the forward, while □2 circles and takes the other forward position on the opposite side of the court.

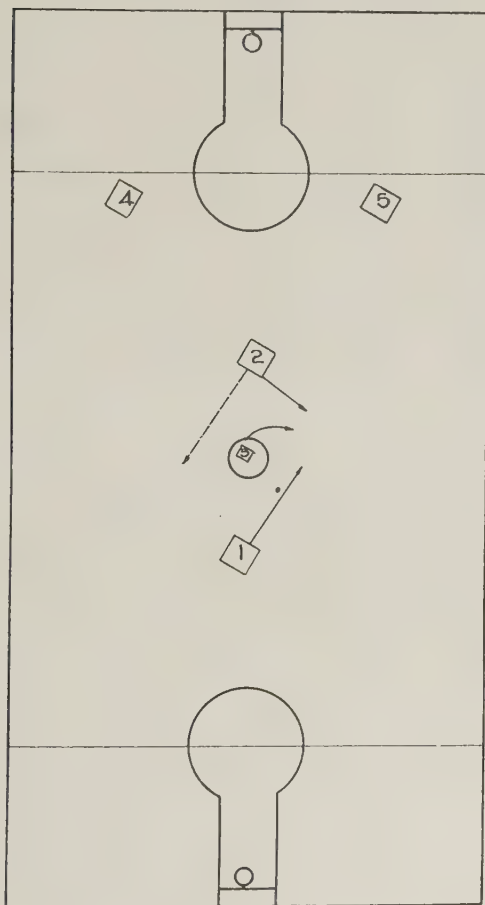
The Funnel Defense

Diagram
25

This formation gets its name from its shape. The funnel defense is a variation of the scissors defense. In this defense, players □1 and □2 are drawn in closer to the center circle, and □1 is directly behind, while □2 is in front of the opposing center. The positions of these players protect against a front or back tip. These players may cover to the same side to meet plays, or they may work as they did in the scissors formation. This latter method of attack is indicated by the dash lines in Diagram 25. In this formation, tips to the outside lanes are comparatively safe, as it is next to impossible for the players to get out to these positions soon enough to stop them. In such a case, the most that could be hoped for would be that □2 could drop back, after the tip, to the side to which the ball has been tipped, and thus prevent a shot. Then, □1 should hurriedly cover to the opposite side to block a pass.

This is a strong formation for blocking the player who receives the ball on the tip. A possible play is shown in Diagram 25. The ball

DIAGRAM 25
THE FUNNEL DEFENSE



A strong tip-off defense for plays passing close to center.

has been tipped to the right inside lane for a guard play. □2 immediately covers to that side and gets in position to block the offensive guard from going forward or to the outside, as he comes to the floor with the ball. □1 covers in behind, to grab the ball, should the offensive guard pivot. The center (□3) steps back and outside of the circle, and covers to the inside. If the offensive guard should come to the floor with the ball, as is usually the case, he will find himself blocked on all sides, and as a result a held ball should be effected easily. □2 should plan to get just in front of the position where he expects the offensive guard to hit the floor after his jump for the ball. Usually, players in the position of □2 can get a held ball by driving for it. Players □4 and □5 play the back court just as they did in the scissors defense.

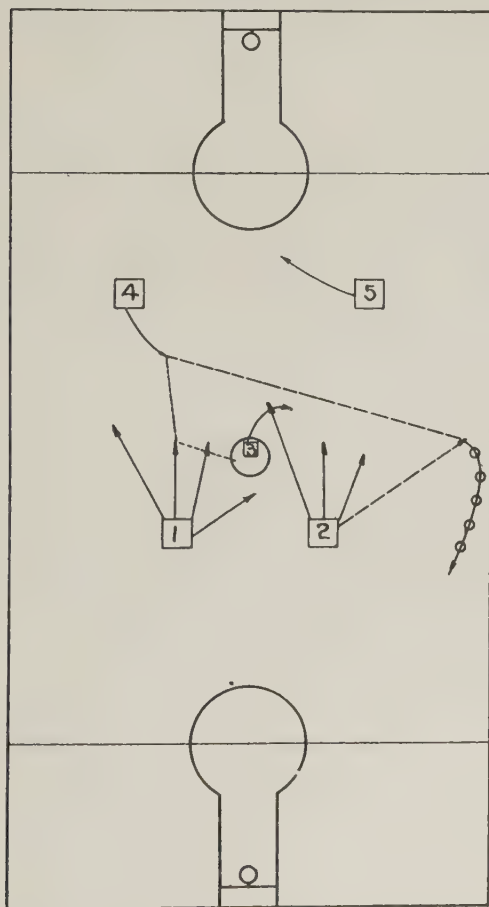
Sometimes this same defense is played by advancing the guards □4 and □5 to positions in line with □2, while □2 drops back to a position in line with the old positions of □4 and □5. This is a weak formation in that the back court is not sufficiently protected and the opponents, if they should get the tip, have a greater chance to score.

The Trapezoidal Box

Diagram
26

If a line should be drawn through positions □1, □2, □5, and □4 (Diagram 26) in the order

DIAGRAM 26
THE TRAPEZOIDAL BOX



Center tips ball to forward. Forward bats the ball to guard. Guard passes to forward, who dribbles in for a shot.

named, a trapezoid will be formed. From this, the name of "Trapezoidal Box" is given to this formation. On the tip, either player □1 or □2 drives for the ball. Which player it will be depends upon the side to which the ball has been tipped. The purpose of the player driving for the ball is to spring high into the air and bat the ball back to the guard who is on the same relative side and who will advance to meet the ball. If the tip has been made to the side of □1, then □2 should drive toward the side line in the direction of the dashed line, so that if □1 succeeds in getting the ball to □4, he will be in a position to receive a pass and dash toward his goal. At the same time, □5 drops back to guard the goal, should □1 not succeed in getting the ball to □4. The center steps back out of the circle ready to go down the court to the left or to drop back into a defensive position. If □1 should miss the ball, he immediately would fall into the forward's defensive position on his side of the court, and □2 would continue to his position, while the guards □4 and □5 would drop back into their regular defensive positions.

The position of the guards at the tip-off protects against front tips, while the position of the forwards prevents back tips. They are also in position to rush side tips, as has been discussed and as is shown in Diagram 26.

It may be in this formation that the opponents

will play one or two men back near their goal. In this case, the guards would have to drop back farther than shown in the diagram. They might play in a line with the center, one behind the other (one guard back near the goal and the other in a line with their former positions), with the understanding that one was to cover to the right and the other to the left, should the ball go to their opponents. This would still maintain protection against front tips.

This formation has the advantages of other formations in that, should the opponents gain the tip, both forwards are in a better position to fall back on defense. They are both moving in the direction of their opponents' goal.

Sometimes a team will concede the tip to its opponents and will place the forwards and guards back on defense at the beginning of the tip-off. Some teams are so clearly outplaying their opponents at the tip-off that this procedure is the wisest, even though it tends to put the team on a strictly defensive game.

It will be seen from the above comments that there is no end to the number of combinations for defensive play at the tip-off. Sufficient weaknesses and strong points of these defenses have been discussed so that other combinations can be built to meet particular offensive plays.

A good well-planned defense at the tip-off will succeed in gaining possession of the ball for its

team a good percentage of the time, even though its opponents control the tip.

DEFENSE AFTER FREE THROW

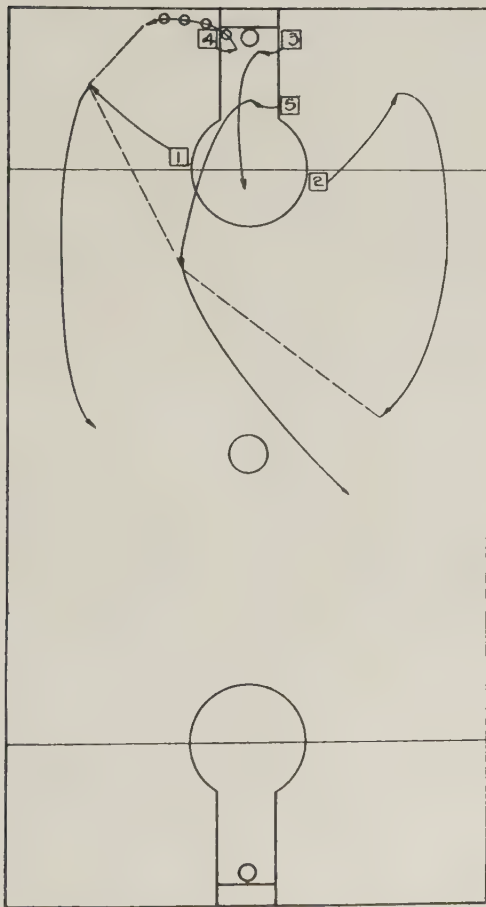
Diagram
27

Many baskets are scored after missed free tries for goals because the defense is not alert and because the vital zones about the goal are not protected. Most scores, after missed free trials, are made from close-in positions on either side or directly in front of the goal, because the ball after the missed goal does not bound far from the basket. Its force and back spin is spent when it hits the basket rim or the backboard. For this reason, the area in proximity to the basket is the most vital scoring spot for tip-ins and should be the zone of concentrated defense. The most logical areas for tip-outs are between the side lines and the foul lane. These areas, too, must be guarded, but not so heavily as the tip-in area, because the danger is not so great there. Missed free throw shots require that the ball be handled twice, the second time being on the rebound. Therefore, the position under the goal is the best place to stop the offensive team's opportunities to score. The goals made from tip-outs, compared to the goals from tip-ins, will be very few.

In the arrangement for such a defense, the two tallest players should station themselves, one on either side of the basket along the foul

DIAGRAM 27

DEFENSE AFTER FREE THROW



Defensive men are placed so as not to allow a set-up after a missed shot.

lines, about two and one-half feet from the end line. This plan keeps an opponent from getting between these players and the backboard, without their being directly under the backboard, so that the board would interfere with their jumping for the ball. These two players must block any rushes from the side by the opponents and must also spring for the ball, should it come to their side,—timing their jump so as to meet the ball while they are at the highest point. These players may legally block any opponent who rushes. By stepping into the foul lane, after the ball has hit the basket or backboard, they can present their backs and hips to the rest of the court. The defensive players taking this position should crouch, ready to spring for the ball. The quick step into the foul lane with the crouch before the jump is made, gives good poise and adds height to the jump.

If these guards obtain the ball, they should bring it down to the floor in front of the advanced foot to protect against a held ball and then pivot (usually toward the side lines) for a dribble into an open position or for a pass to a team mate. Immediately after such a pivot, it may be that an underhand or a hook pass will be in order.

The third defensive player should station himself at the intersection of one of the foul lines with the foul circle. The moment the ball

touches the rim of the basket or the backboard, he should step into the foul lane with his back and hips presented to the opponent who has just made the shot. This defensive man must block any opponent who drives down the middle of the court for a follow shot. He is also in a position to get any rebounds that come directly back to the front. These three players should form a triangle of defense about the goal and should in most cases intercept the ball.

The other two defensive players should station themselves at the point of intersection of the foul circle with the goal zone line. They should be responsible for the guarding of the territory bounded by the goal zone line, the end line, and the side lines. These two players are also responsible for any tip-outs. They must meet and recover any rebounds which go over the heads of the players around the goal. These men must necessarily be a trifle slower getting into action than their team mates, because they must first determine the direction of the opponents in their territory and wait for any tip-outs to take that direction. By rushing in too quickly, these men would either overrun the ball or let an opponent elude them and get the ball for a shot.

Should a defensive man who is under the basket recover the ball, his team mate, who is on the same side to which the man with the ball will pivot, should move to the side lines, where

he will be in good position to receive a pass out to him. The player on the opposite side of the court should move quickly toward his own goal for a long pass, from across the court. A quick thrust like this, before the opponents have had time to shift to the defense, will net many needed scores. It is the quick, smashing surprise play that throws the opponents into a momentary trance and gains the needed points.

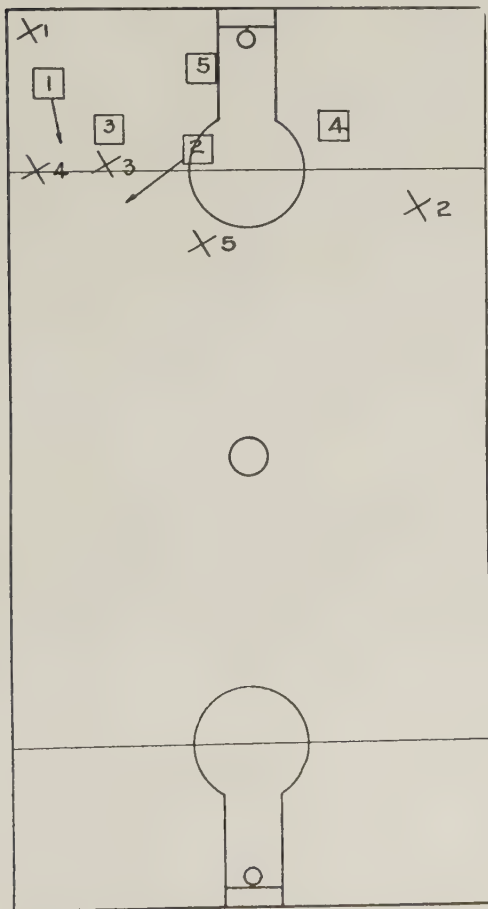
So long as the remarks are directed to a team mate and are neither abusive nor unsportsmanlike, talking while an opponent is attempting a free throw is good strategy. If often disconcerts the thrower and causes him to miss the basket. Anything, whether pertaining to the game, the crowd, or a subject remote from the game, can be used. Such a conversational topic might be uncorrelated directions to team mates; such as, "You take him in front, and I'll get him behind," etc. Or, if the defensive team knows any of the thrower's personal history,—such as his record for scoring or for not scoring,—or some joke or tale about him, such information can be used at this point in the game to good advantage. Jestings will have a tendency to distract an opponent's attention and to make his shooting less accurate.

DEFENSE AFTER A HELD BALL

Diagram
28

When a held ball is declared outside of the opponents' scoring zone and near or beyond the

DIAGRAM 28
DEFENSE AFTER HELD BALL



Defense builds wall around basket to
repel invasion.

center of the court, the same defensive formations can be used that are used at the tip-off. The regular defense that is used by a team at the tip-off is usually good. If one of the jumping players is decidedly taller than the other, usually the taller player will tip the ball back and catch it himself. In anticipation of this, one player should be behind the tall opponent. When this opponent who gets the ball turns around, the defensive man stationed behind him should charge the ball, carry it to the floor, out and away from this opponent before he has time to realize what is happening. This method of taking the ball from an opponent has been described, step by step, in the chapter on individual defense.

If the held ball should occur near or within the opponents' goal zone, the best defense, when it is almost certain that the opponents will control the tip, is to keep the strength of the defense between the two jumping players and the goal. Diagram 28 may be taken as a typical situation for a held ball within the opponents' goal zone. The defensive players □4, □5, and □2 have formed a triangle of defense about the goal. □5 is in a position to cover the territory back of □1, between the goal and the side line. □4 is covering the area on the far side of the court in order to prevent any "sleepers" from slipping in behind the defense. □2 is guarding the

center of the court and the area on one side of the jumping players, as well as the territory back of them. □1 is guarding against a tip toward the side lines. □3 and x3 are jumping for the ball. Should x3 catch the ball on the tip and pivot back, he would be blocked by □1, □3, and □2. If the ball should be tipped back safely, the defense would move immediately to the lopsided five-man set defensive formation.

DEFENSE ON OUT OF BOUND PLAYS

The ball is played from out of bounds more than from the tip-off, so that it is very important to form a defense for blocking plays and for obtaining the ball on out of bounds.

In the first place, when the ball goes out of bounds, the player nearest to the ball should go right after it with his hand extended above his head so that he can call the attention of the official to the fact that he is the one to whom the ball should go. Often if there is a doubt in the mind of the official as to who last touched the ball, a player by such tactics can gain the decision. At any rate, he will show that he is alert and that he is playing for every break.

In out of bound plays, a cool and versatile defense has a fine chance to regain possession of the ball. The opponent with the ball has only five second to pass the ball into the field of play and many times, through fear of holding it too

long, passes too hurriedly and gives an alert defense a chance for the breaks.

The player guarding the opponent with the ball can do more than anyone else in helping to intercept it. This man on defense should do everything possible to worry his opponent and to so distract him that he will lose track of his team mates who may be strategically located. A guard in such a position should never be caught without his arms outstretched and his feet apart; but should wave his arms, talk and yell, and shift about on his feet. He can block low passes and floor bounces with his feet as well as with his hands. He should watch his opponent's eye and at the same time watch the ball. He should never allow any feints or distractions from other men on the court to divert his attention, even for the fraction of a second, from his opponent who is in position to pass. He should get as near to his opponent as possible, thus making a smaller passing angle and, consequently, lessening the territory that he must guard.

Ball Out of Bounds Opposite Opponents' Goal
—When the opponents are awarded the ball out of bounds opposite their own goal, the two defensive guards should drop back immediately near the two opponents who are farthest back. The other three players should cover their opponents in a man-to-man fashion and should drop

back only after they have failed to intercept the ball and their opponents have started an offensive.

Many teams when they lose the ball under their own goal on out of bound plays immediately fall back on defense. This is conceding everything to the opponents and should not be done, unless a team wishes to recover from a strenuous offense and all of the legal time outs have been used.

Even though the percentage of chances for recovering the ball from out of bounds are against the team on defense, nevertheless, two or three interceptions during a game may turn into easy goals. Fighting for the ball always worries the team that is awarded the ball. The defense should never give up.

Ball Out of Bounds Under Opponents' Own Goal—When the opponents are awarded the ball out of bounds under their own goal, perhaps the best defense to use is the five-man cup defense. Diagram 29 shows a typical case of such out of bound play. One of the defensive guards (□5) should cover the player with the ball. The other defensive guard (□4) should be stationed near □5, and an offensive forward (□1) should be stationed on the other side of this trio. These players will be a little farther out in the court than □5, but not far enough out for an opponent to get between them and

Diagram
29

the end line to receive the pass. This arrangement forms a cuplike defense similar to that used in football. □1 and □4 are responsible for guarding the corners and the court behind □3 and □2. □3 and □2 always fill in the center of the cup and are never beyond the goal zone line. The defensive players, with the exception of □5, who directly faces the player with the ball, should face halfway between the player with the ball and the relative opponents. This position should place their backs away from the goal. At the same time they should always keep between their opponents and the goal.

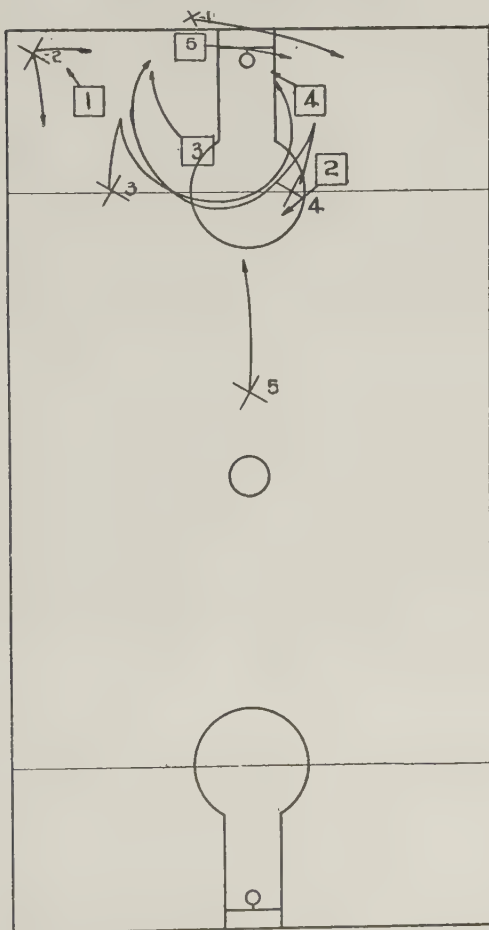
The defense should never follow its opponents man-to-man when the play is in this part of the court, for they might be pulled out of their positions by one opponent while another opponent slipped into the space left unguarded for a set-up shot. If the ball should be successfully returned to the court by a long pass out to x5, the defense should immediately move out to its regular five-man set defensive positions.

If the ball to be passed in, is directly under the goal, the defense should be balanced in the center of the court; while if the ball is to one side of the goal, the defense should be unbalanced or strengthened to that side, as the opposite side is farther from the ball and is thus less liable to attack.

In the diagram shown, □2 is in a position to

DIAGRAM 29 **DEFENSE ON OUT OF BOUND PLAYS**

Under Opponents' Goal



Defensive cup formation protects the basket;
 also allows a quick break from
 defense to offense.

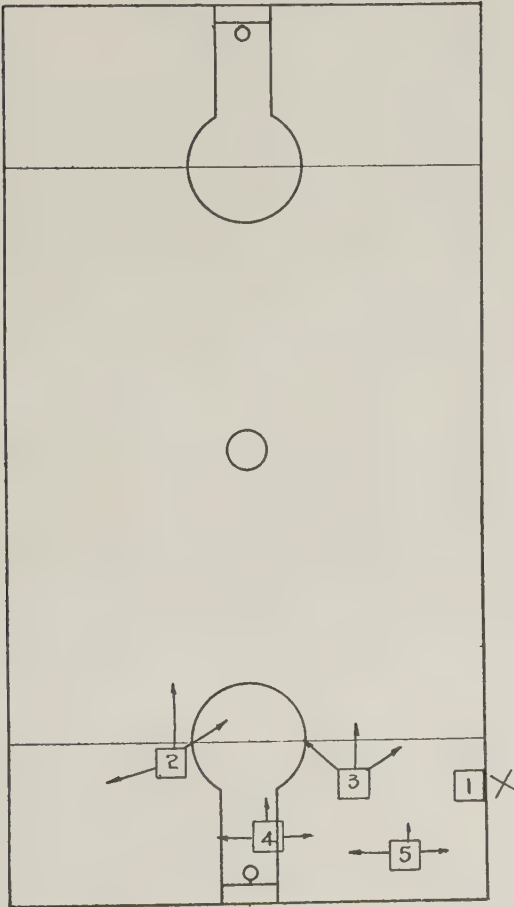
advance out into the court to intercept a long pass over the defense. If the ball were on the opposite side of the court, □3 would be in position to do this.

Diagram
30

Ball Out of Bounds at the Side Line in Opponents' Own Goal Zone—If the ball is awarded to the opponents out of bounds in their own goal zone but along the side line, the regular, though compressed, five-man defense should be used. This time, unless the ball is in the very corner of the court, one of the outside players in the primary line of defense should cover the opponent with the ball. A large, rangy player, usually a forward, should be assigned the task of guarding the player who is out of bounds. Such a rangy player on defense can give the man out of bounds more trouble and can make his intended plans for the return of the ball more uncertain and more difficult than can a smaller stocky man. Diagram 30 shows the positions of the players in such a defense. The defense is compressed to the space inside the goal zone. The guard toward the opposite side of the court should move to a position almost in front of the basket. □5 should be stationed nearer to the side line than to the basket. □1 should guard the player with the ball, while □3 should be in the front line about midway between the defensive guards (□4 and □5). □2 can act as a floater who may drop

DIAGRAM 30

Ball Out of Bounds at the Side Line,
In Opponents' Own Goal Zone.



Massed defense in opponents' own goal zone
insures against short shots.

back or move out. He should intercept long passes across the court and should prevent a "sleeper" from slipping down the far side of the court for a set-up shot.

HOW TO BREAK UP A ROLLING OFFENSE

Diagram
31

By a rolling or revolving triangle offense is meant an offense which employs three or more men passing the ball at angles while the men themselves go down on curves, always cutting in behind the men to whom they pass. The secret of the success of such an offense lies in the ability of the passer to pivot around and get the ball quickly enough to avoid a clash with the defense, and, at the same time, to advance on the next curve in time to get back into the play.

This style of offense with its variations recalls the German military tactics, which is mechanical and not versatile. The best system is a flexible system. Just as the rolling German military advance swept everything before it until the sleeping world awakened and formed a defense to meet it; so did the rolling offense in basketball, in its infinitesimal part of compared magnitude, during its earlier days, meet and sweep everything before it. The rolling offense found the basket-ball world sated with old methods and indifferent to new ones, so that it virtually swept every team that it met off its feet for

several years, until the rest of the basket-ball world arose from its satiety and met this offense with a defensive power that could stop it. Now, there is no great difficulty experienced in turning back a rolling offense by intercepting the ball. The following play (Diagram 31) shows a method that will work havoc with any rolling offense, no matter how well-gearred and how high-powered it may be.

In executing the play all that is needed for its success is co-ordination of mind and muscle; alacrity and cool-headedness, or mental poise. It may be that the last requisite is the greatest one, for a team upon which there is one man who loses his head in any department of the game is like an engine with one bearing burned out. It has a knock in it—no power and no pull.

The Play—To break up a rolling offense, a man-to-man defense cannot be employed. The offense would so entangle the defense that it could not extricate itself until a goal had been scored. The object of the rolling offense is to pull the defensive players out of their positions so as to give space for a player to slip through on a dribble to the basket. This diagram will show the relative positions of the defense and the offense—with the offense ready to break through. The offensive players x1, x2, and x3 have worked the ball up the court to a position

in front of the defense. The offensive center (x3) then dribbles toward □2 in order to draw □1 over in the direction of □2, as shown in the diagram. The dribbler then pivots, blocks □1, and passes to x1, who dribbles by for a shot.

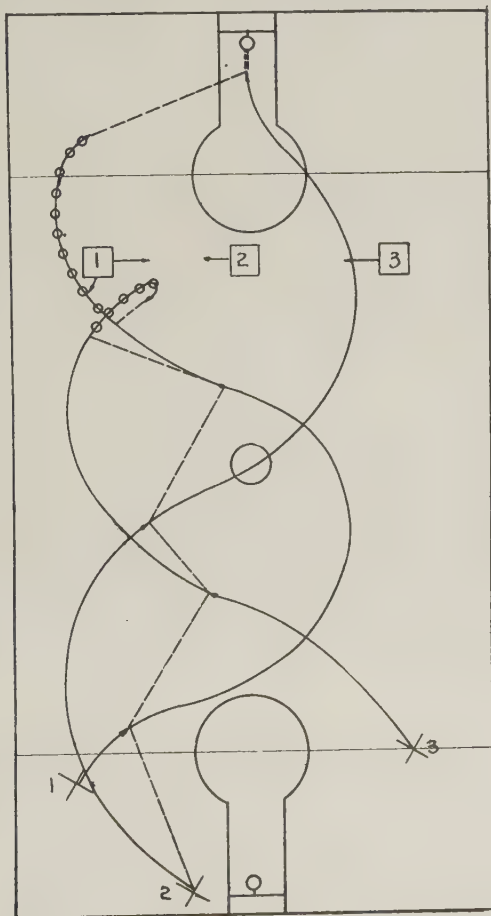
In order to prevent the success of this play the following tactics should be employed: □1 should charge x3 by using the boxer's catch step, which is the correct fundamental advancing step employed by guards. The use of this correct guarding step will avert any possibility of the player being overbalanced. He should charge far enough to prevent x3 from dribbling between □1 and □2. Then □1 should take a quick uppercut at the ball. This blow will many times knock the ball from an opponent's grasp. □1 should now step over and back toward his former position. As x3 pivots and passes to x1, x1, as he comes for the ball, will find his path blocked.

If □1 is quick to follow up, the attempted pass may result in a held ball. At least the offensive advance will be blocked and must start over only to meet similar defensive tactics. It may be that x3 will attempt to pivot in the opposite direction and pass to x2. If □2 will employ the same tactics used by □1, x2 can be blocked off just as easily.

The direction in which x3 will pivot can be determined by watching his feet. As the block-

DIAGRAM 31

HOW TO BREAK UP A ROLLING OFFENSE



Guard using boxer's catch step confuses dribbler in rolling offense.

ing pivot is commonly employed, the player will pivot on the foot that is forward. If the left foot is forward, the player will pivot with his back to his own right. If the right foot is forward, he will pivot with his back to his own left.

By following these directions, one guard can block two offensive players who try to pass by him with the rolling offense. Such an offense as this becomes a simple toy in the hands of any guard if he will always remember these points: (1) never charge headlong for the player with the ball, but charge with catch steps so that the body balance will always be maintained; (2) worry the player with the ball first by feinting and then by taking an uppercut at the ball; (3) watch which foot is forward before the pivot is started; (4) shift to the side of the pivot and back, in order to miss the intended block and thus meet the player who is coming to receive the ball.

CHAPTER VI

Inspirational Coaching

BUILDING TRADITION

Real teams are built around tradition. A school without tradition must build it. Winning teams make athletic history. Without victories, schools lack traditional atmosphere for those who come after. Athletes in such schools are void of the desire to emulate superb players. Superb players are victorious players.

Give "Old Timers" a Cordial Welcome—"Old timers" should always receive a cordial welcome around the gymnasium and on the campus. See to it that every player on your present team has a chance to shake the hands of former stars when they come home. Arrange little "has-been" evening chats whenever possible, so that the present lads may enjoy the atmosphere of other years.

Evenings like these are bound to bring out many greatest games and greatest plays, and the young player will be charmed and fascinated in this vivid atmosphere created by the "old timers" in retrospect. And out of it all will come greater reverence for the school, more profound respect for the old star who has returned as a success in life's adventures, and a deep desire to emulate these traditions of skill and courage.

In this connection, I recall the story of a football end of other years who had returned for the big game. He was riding out to the field on the bus with the football end who was now filling his own former position. In conversation with this end he said, "Well, old man, the team you hit today never gained a yard around my end during the three years I played."

Silence then played an effective role. The end, who was to play that position on this day did not answer, but in his heart he vowed, "If this fellow held down the same end that I am to play today for three years and left behind him such a record, the man who skirts my end in this game will die."

These heights to which players are led to do the near impossible are, without exception, the results of psychic stimuli. This time it came from the "old timer"—the very stratum of tradition. A silent urge to an aspiring player often determines the depth of his resolve.

Athletic Galleries—I believe in athletic galleries in the gymnasium. They should be maintained and added to consistently throughout the years. They build history, a knowledge of which is valuable in the life of the player.

Athletic Gallery of Alonzo Stagg—Coach Alonzo Stagg of the University of Chicago perhaps has the most noteworthy collection of this kind in the country. Pictures of the "C" men in all sports are placed in these galleries, with

a star above each captain. An athletic gallery where the players of this year, next, and next, may study the faces of the men who have played their positions in years previous stands ever before the aspirants as an effective and silent talk.

Respect for School Officials—Foster reverence among the men on your teams for the president and the faculty of your school by requesting that various members of your faculty make occasional talks to the boys in the dressing rooms before the games. Create respect for the other sports by asking the coaches of the various branches to make occasional informal talks to the team. Arrange “pep” meetings in which the team is given a position of prominence and the school band and the students are given every opportunity to express their unqualified support of the team. All of this stimulates school spirit, which in the end spells tradition; and tradition is the mother of loyalty.

Story of a Lad Who Lived True to Tradition—One of the best basket-ball players I have ever seen was a lad, who, as a slip of a tow-headed boy in the grades, had carefully studied the maneuvers of the school’s greatest athlete. This “greatest athlete” was a local boy also, and in the life of the little boy had become much the same sort of influence as did the “Great Stone Face” in Hawthorne’s tale, to another boy who

sat in his doorway at evening, as the days and years passed by, gazing at the great face and longing to grow more like it. It was a tangible ideal, as was the school's "greatest athlete" to the little tow-headed boy in the grades.

In the big game of the year this greatest athlete received an injury which, it is alleged, ultimately meant his death. The little hero-worshiper, throughout the rest of his boyhood years vowed and revowed to live to take the place of this great athlete whose death was glorified in the life of many a little boy about town.

The young hero-worshiper lived true to his ideal and to his vow, and grew to be a fine, clean, clear-brained athlete,—an honor to his school, a "scrapper," and in every way worthy of the ideal in the life of his hero. He lived true to tradition and left illuminated history behind.

GETTING CLOSE TO YOUR MEN

Go With Your Men Individually—Perfect technique, perfect team work, good conditioning, and the building of tradition are not enough. The truly successful coach must go with his men, individually, beyond the field of conditioning and beyond the field of play. He must get into their hearts; he must know their folks; he must find what interests them most; he must study their different temperaments, as he would study the temperaments of his own sons. In short, he

must "get under their skin," feel their sorrows and help to find remedies for them.

Inspiration Cannot Be Standardized—Inspirational coaching can not be standardized as technique has been, and can be successful only so far as the coach permits the light of his own personality—his own soul—to shine through.

The Trouble May Be Deeper Than Staleness—I have had well-oiled, high-powered team-machines utterly shattered for a time by a keen disappointment to a player. On some occasions, it has taken weeks to help the fellow find himself—his shooting would be inaccurate; his passing, uncertain; his team work, ruined; and his intellect, stagnant. A man, perhaps, who had in years previous and in games previous played like a flash—heavy, fleet, baffling opponents, and thrilling spectators, now playing like a "dud." Crowds saying, "What's the matter with 'Red' this year? He's not going at all." And "Red" aware of his off-form has faced many an audience in humility and shame, with his psychic self suffering a shock that he, try as he might, could not outdistance. The physical body cannot act co-ordinately when that spark of ambition that fires men to acts of courage has smoldered.

Do Not Preach—In such mental crises as these, coaches must tread carefully. Preaching carries no weight. "Busting in" to a fellow and

calling him a "quitter"—efficient as it is many times under other conditions when shock is needed—tends only, in such cases as these, to add greater mental depression to a lad who is already, as he puts it, "down and out." Such tactics do not avail.

Have a Quiet Talk—When you find such conditions sapping your team's strength, it is well to make an appointment with the lad in trouble for a quiet talk in some appropriate spot. Sometimes the office is best, if the player feels most at home there. Or, it may be your den in your own home is the place. Or a virile hike into the hills, when the icy blasts of basket-ball weather come to meet you as you open the door, is a worthy retreat in such crises. For souls in struggle find an easier outlet for expression while the body is in action and is, at the same time, forced to battle with the weather elements of the world.

It May Be a Depression Brought On By Financial Straits—Perhaps the player's trouble is depression excited by lack of funds and he cannot see how he can go on to school. Or it may be too much work and not enough time to study. It may be incompatibility in the home. Or it may be a love affair. Whatever it is, an earnest coach will find it out and endeavor to substitute happiness for misery. It is true that the player's power resides directly in his nerves

and muscles, but a psychic stimulus applied to these forces will whet his athletic power.

We Have No Scales Delicate Enough to Weigh Men's Finer Athletic Qualities—We have scales in the gymnasium for weighing men before and after practice to determine their physical fitness; but research has, as yet, given us no set of scales, however sensitive, to determine man's finer athletic quality—that indefinable something that upsets "dope" and causes a man to chalk up half a dozen field counters in one game and to play scoreless in the next.

Earnest Men Make Sacrifices That Hurt—If a player is financially depressed, aid can be found in many legitimate ways. In fact, I can say, in all truth, that I have never yet found a player in dead earnest about his education who has not found a way out of financial difficulties through work and through student loan funds, even though, at times, circumstances have pressed hard.

One of the greatest centers I ever had, lived on two meals a day during his first two years in college, so that he could make ends meet. Others of our most superb natural athletes, who have made history for their schools, have worn coats with frayed cuff edges and trousers with neat patches, both at school and on trips—clothing that hurt their pride, but not irretrievably. For, in the hearts of these earnest

men, the goal was the thing,—a college education.

The "Floater"—The other type of athlete is the "floater," who keeps his eyes on the ground. He does not seem to be able to look forward. He will not play for his school, because it has never become a part of his heart. In his development, athletics have been misapplied. He does not know the higher field of inspiration; and in high school or in college, wherever he is (regardless of his prowess as a player) his team, his coach, and his school will be better off without him. At best, he is a disorganizer—the most potent poison that can be injected into any team.

It May Be Depression Caused by Low Class-standing—If the player is failing in his studies and is mentally depressed on account of this, get a team mate or somebody who knows the subject in which his class-standing is low, to boost him along. Take his textbooks along on the trips and let the chap who knows most about the subject in question, study with him while in travel. This kindly assistance of team mates to each other is a splendid way of promoting friendliness. It stimulates interest in the other fellow's life outside the basket-ball realm. It promotes a feeling of kinship among the men and very soon petty jealousies are completely wiped out; and the men are all for the big thing—the team—and for the best men for the

positions on the team, regardless of who they may be. Submergence of self is a valuable psychic situation to be developed in the building of a team.

Players Can Tutor Each Other—Many times I have seen the entire trip enroute spent by players tutoring each other,—“trig” here, calculus or, perhaps, English Lit. 23, there, and so on. I have yet to see a player with any native ability whatever, who, when handled in this way, has failed to make the hill. His team mates will not let him fail. They find secret pride in their ability to tutor; satisfaction in their ability to help; keener interest in the struggles of a team mate; friendliness in closer companionship; and a feeling of personal success in making it possible to keep the personnel of the team intact.

Inquire About Class Standing—I have always made it a point, three or four times each semester, to ask the players how they stood in their class work, so that we might, as a team, avert any possible calamity of ineligibility. When a player is low in class-standing, we go right to work in the manner outlined above. We do not mix fun and play with study. We make it serious. In my seventeen years of basket-ball coaching, I have lost but one regular player through scholastic ineligibility, and that was through a technicality of which we were, at the time, not aware.

It May Be Incompatibility in the Home—Incompatibility in the home is a serious sort of

depression, and, so often, one which we, as coaches, cannot reach. In many cases, however, especially if the player is a local boy, much can be done to remedy such conditions. If possible, get intimately acquainted with his parents. You will have a common talking point and a splendid chance for your personality to win. The parents are, regardless of incompatibilities, the proud possessors of this boy. You, as coach, are the salesman. Sell the boy and his aspirations to his parents. Make them appreciate in their son, a college star. Be the mediator, and in a short time the boy will be a realized asset rather than a liability in his home. His parents will become some of the most ardent rooters at the games; and, in all probability, the mornings after home games this lad will be getting eggs and toast served to him in bed. And you will find in the boy a new will to do and a new power to execute. You will then get all he, as a player, has to give.

It May Be a Romance—Or the depression may be an affair of heart—a romance. I have had fine machines more completely wrecked by such depressions than by any others. In handling such cases, you will need not only strong personality to aid you, but great tact and delicateness. You will often be forced to seek outside aid in order that you may outline, perhaps through the player's best boy friend, a definite plan of forgetting, by means of skillful

and unsuspected substitution. Well-planned double-dating on weekends is an excellent way to bring this lad back.

Such cases are often slow to respond and stubborn to handle; and the very fabric of a team may be shattered for a full half-year, or longer, by such aggravations, before any efforts will bring success. Many coaches have lost men for full seasons by such a route; for the coach must deal with the men during their years of late adolescence and early manhood. These are petulant and stormy years for many boys who get lost in a labyrinth of romances.

GETTING CLOSE TO YOUR TEAM

Be at Gymnasium Early—Always aim to be at the gymnasium an hour before the game starts,—milling in and around the dressing rooms and on the floor while the men are working out, with a word of encouragement and friendly criticism here and there, such as, “Nice going, boy,” “That’s the battle,” “Not so hard,” “Raise your shot,” “Follow in.” Or, if a player is caught speaking to somebody in the crowd during the work-out period, “Keep your mind on the game,” “Forget the bleachers,” etc.

Instill Confidence and Concentration—This twenty-minute work-out period should be spent quietly instilling concentration and confidence into your team. A coach should never arrive at the gymnasium late, as the players learn

to rely upon his presence. When they go on the floor to practice before the coach arrives they miss a vital something that belongs to them. This feeling of loss causes distraction and lack of poise and often imperils a game. During this pre-game period the team wants to feel your presence, and to know that you are back of them, heart and soul.

IN THE DRESSING ROOMS—JUST BEFORE THE BATTLES

Big Squads—I believe in big squads of regular players—twenty-five or thirty men. First, on account of the morale. A large squad touches more lives and creates keener interest. It also gives the men who may later make the team valuable experience. It is spirit that pulls teams to victories, and large squads produce it. Large squads, like large families, grow to be more unselfish. Constant sacrifice of self is the big program in the building of teams; and, in order that a player may continue as a member of this team-family, he must be first, last and always for the whole thing rather than for the part.

In the Assembly Room—In the room where we assemble for our last-minute talks, we have a bench that seats five or six men—the men who will start the game. When the men come in from their twenty-minute work-out, silence reigns. We have an unwritten rule that no one who enters this room during this period shall

speak, with the exception of the coach. During these brief moments before the game, the coach should reassure his men of the high points in the immediate opponents' style of attack—which have all been charted and analyzed the day before. Once assembled, ordinarily, my first act is to call the names of the men who are to sit on the bench. If in a quandary over the choice of one of the men, a minute may elapse while I, treading back and forth, study the countenances of the men in front of me before the final member of the team is chosen. There may be two men who are so nearly on an equal in playing ability that I watch for a chance to catch one of them off-guard to see what is in his face. Sometimes, after my mind is made up to play a certain fellow, I find, in one of his unguarded moments, that his face lacks the fighting spirit that we need, and I switch to another man whose face shows it.

In these assembly rooms, before tense games, a coach faces earnest men. He must speak to them as the occasion demands. In easy games, easy methods suffice; but in moments before great games, a coach must be an inspired being. He must rise to meet the occasion and give to the men in these fifteen minutes enough of the superhuman to carry them through twenty minutes of grinding toil.

Assembly Room Talks Cannot Be Standardized—For the benefit of coaches who are new

in the game and who find it hard to express themselves, I am giving a sample of the context of an appropriate talk, to be varied as the occasion demands. A coach must *feel* the spirit of his players, just as a successful artist must feel the colors that come from his brushes. Therefore, no talk can be standardized.

Context of an Appropriate Talk—"You five men on the bench represent, at present, the best five in the university. You are the chosen ones of your state tonight to start this contest. As long as you're in there battling all the time, you stay. You've got to play forty minutes and not thirty-nine. We are now concerned in the first twenty minutes of this fight. One man alone cannot display his best and win, but *five men can!* You've got to run the hearts out of your opponents first, and then beat 'em.

"You will not remember these plays so vividly tomorrow as you will twenty years from now. When, by your own firesides, you will play them all over again. Tonight you are setting a mark for other teams to shoot at. You are building athletic tradition. Hard fight, but clean fight! And fight all the way! Let's go!"

Then, with a forceful handshake and a vigorous slap on the back, interspersed by personal admonitions to each of the regulars, they are off. These personal admonitions to the regulars should be of this order:

"Bill, not a man has ever seen you quit a

minute in any game in which you have played. May the rest of the gang go like *you*."

"Mac, you are in the game just as long as you go. At the least let up, out you come. You can play if you will. This is your chance."

"Jack, I can always count on you in an emergency. We'll need your leadership tonight. Let's go, boy, you're the stuff."

Inspirational Bits—Occasionally through the years I have picked up inspirational bits, here and there, that have been useful in these minutes before great games. It is well for a coach in his reading to be on the lookout for this type of thing and to clip it for future needs. Youth responds readily to this type of inspiration.

One such that I clipped long ago follows. To my surprise, I have had players quote these lines to me years afterward—players in whose minds I had never dreamed that the simple lines had lived. Such bits of inspiration give just a little of that indefinable power in some needed spot. They give a fighting courage.

"If you think you're beaten, you are
If you think you dare not, you don't.
If you'd like to win, but think you can't,
It's almost a cinch you won't.

"If you think you'll lose, you've lost;
For out in the world you'll find
Success begins with a fellow's will.
It's all in the state of mind."

In ordinary games, do not key men high. Never let your inspirational force go stale. Let

the occasion be your guide. But in a crucial game, send a man on the floor with his soul on fire. Study the souls of your players, as well as their heads and hands. The grip that the coach gets on the hearts of his players carries them to sensational victories. And in these sensational victories, the spectators get the thrills they love.

Men Outside of Themselves—In crises men play outside of themselves. Oblivious of self or of crowds. Freed from the bondage of entity. Loosed souls—afire, forgetting all but the sting of probable defeat. It is men like these—inspired men, if you please—that lead athletic squads to victory, just as truly as it was an inspired Joan d'Arc that led a people on the fields of France.

STORY OF ONE GREAT GAME

I hold close in my fondest memories of these seventeen years behind, the memory of one game that I would not trade for a rich man's gold. As a lightship on a raging sea guides a storm-tossed sailor, so has this memory guided me and will guide me many times, when disaster threatens. It has strengthened my faith in compensations and my faith in men. It is not the winning of the game that I cherish, but the memory of the spirit of the men who played the game. As an inspiration to other coaches, with permission of my splendid captain of 1923, I am giving this story in detail.

Missouri-Kansas Game, January 16, 1923—In 1923, Kansas had her first ever-victorious season

in basket-ball—in fact, the first ever-victorious for any basket-ball team in the history of the Missouri Valley Conference. The facts of this story occurred in mid-January after we had played five games of the ever-victorious season.

We had returned on the Sunday before this game, from our northern trip through Iowa where we had played three hard games in as many days, with Grinnell, Ames, and Drake, respectively. Every regular came home crippled. Black, right guard, and Wulf, center, had Charley-horses; Bowman, left forward, had an injured back; Ackerman, right forward, had a twisted knee; and Endacott, left guard and great captain of that year, had two badly sprained wrists—all results of this northern trip. On the following Tuesday, two days later, we were to meet Missouri, our stiffest competition in the year's race. The year previous to this, we were tied Valley champions with Missouri, with 15 won and 1 lost, the defeat of each being at the hands of the other.

We spent the few hours at home, trying to patch up injuries as best we could in a short time, and left Lawrence via Kansas City on Monday afternoon. We were traveling by way of Sedalia, Missouri, where we were to stay all night. We had planned to arrive in Columbia the day of the game. From Kansas City, we sent a wire to Pleasant Hill, Missouri, for a seven-o'clock dinner for eleven men. This was

to have been served to us on the train. The arrangements for the dinner had been made previously with the Missouri Pacific traveling passenger agent, as there was a stop of only five minutes at this junction point. According to our previous arrangement, we were to eat our dinners enroute and to send the service plates back from Sedalia. But, like other well-laid schemes, the order was "balled up," and the caterer, utterly ignorant of the training diet for an athlete, prepared fifty-five dry sandwiches and served them to us in two large market baskets. It was impossible on this local train for the team to have other diet until we arrived in Sedalia at nine-forty-five p. m.

We left Sedalia at six the next morning in order to make connections at McBain for Columbia. This plan should have given us a chance for a good rest in Columbia before time for the game.

When we left Sedalia we were, according to train schedule, just two hours and forty-five minutes from Columbia. We had planned to eat our breakfast there, but at McBain, nine miles from Columbia, we found that the "plug" train that carried passengers from McBain to Columbia had broken down. Every fifteen minutes for an hour, the station agent reported that the train was coming. At the end of the hour, we telephoned to Columbia for busses and sought breakfast at McBain. McBain, aside from the station

and a typical Missouri negro eating shack, does not exist. True to the traditions of the South, these negroes who ran the eating shack served only their own color. But on this morning, they were asked to serve eleven hungry white men who had eaten only dry sandwiches for dinner the evening before. So the colored population moved out of the shack and our basket-ball team moved in. We sat on soap boxes for chairs and ate from dry goods boxes for tables. The menu was "Ole Missouri sow-belly and eggs," some half-cooked oatmeal with milk—all, washed down with bitter coffee.

At ten-thirty a. m., just as we had finished eating, a picnic truck arrived—a moving van with seats in it and with canvas curtains on the sides to keep out the January blasts. We boarded the van and started for Columbia. Three miles on our way out, in the Boone County hills, the truck broke down. The squad, half-chilled from the long wait in the wintry weather, started to "hoof it" six miles into Columbia. We left our grips in the truck and took up the hike, singing our Alma Mater song, "The Crimson and the Blue," and followed it with "I'm a Jay-Jay-Jay-Hawk." It was imperative that we keep up the team morale; for the big battle was to be staged in less than eight hours.

Three miles down the road, the truck overtook us. We "piled" in again and pulled up at Rothwell Gymnasium, in Columbia, at twelve-thirty

p. m. The roads were dry and dusty, and the loose canvas curtains, aided by the lack of fenders, slapped the dust into the boys' faces and clothing, so that when they alighted they looked more like a bunch of miners than they did like a team of college players.

We washed at the gymnasium, but did not change our clothing. We put on our basket-ball shoes, and shot a few goals to accustom ourselves to the strange court. We wanted the boys to see the battleground minus the crowd. We worked twenty minutes.

It was Tuesday p. m., and the boys had not sat down to a real meal since Monday noon in Lawrence, Kansas. These unavoidable circumstances had caused us to upset every theory of training that we had thought we possessed. But now, six hours before the game, we were settled in a good hotel with a good meal.

It might be interesting here to give this menu:

One-half head lettuce, French dressing
Porterhouse steak, one and one-half inches thick
Baked potato—Dry toast—Butter
Sliced Peaches—Cocoa

The idea of giving a man a meal like this after one o'clock in the afternoon on the day of a crucial game, which was to be called at seven, sounds irrational indeed. But the men were half-starved, and they needed the meal to strengthen their morale.

After a short walk to "limber up," they went to bed at two. Up at four, they dressed for a two-mile hike—this to overcome grogginess. Weak tea, toast, and sliced peaches at five. Then, to a private room for a thirty-minute discussion of Missouri's style, and afterward, on to the gymnasium for the battle.

True to Missouri-versus-Kansas traditions, the bleachers were packed to the guards with howling, seething Missouri rooters, eager to defeat Kansas. The game was on. And the rooters unaware of the Kansans' vicissitudes of the past twenty-four hours, and therefore unaware of the Kansans' true physical condition, were not overconfident.

With but one field goal apiece at the end of the half, the score stood 6-6. The air was charged, and the teams fought neck and neck for a break which did not come.

The half was over. In the Kansas dressing room, five substitutes worked feverishly over five panting men. It was serious business. Not a word was spoken. A bigger battle loomed ahead. For four minutes, the regulars rested, relaxed, eyes closed and cold packs on their heads. Suddenly the referee called out, "Three minutes." Everybody up; towels thrown aside. With final instructions on offense and defense, men flung themselves together for the last appeal. Sensitive ears all over the state of Kansas were waiting for news of victory. We were in the hands

of the enemy, half through and scores even, and even scores did not win games. More power was needed.

Down the stairs came the sounds of that familiar battle cry, "Eat that Rock-Chalk Jay-Hawk up! Eat that Rock-Chalk Jay-Hawk up! Yea, Missouri!" This was the cement that bound. In the minds of these boys, the game took on a new meaning. Before, it meant two universities; now, it meant two states. The Kansans went on the court again with jaws set and souls on fire.

In the last half, the first ten minutes failed to break the tie. Then a Missourian rang up a beauty. Missouri followed this break with another. Then Kansas came through with a pair. Missouri called for time out. The score was 10 all.

When the game was on again with eight minutes to go, Missouri, in quick succession, chalked up three field counters. Kansas called for time out, and Missouri rooters went wild. Continuous cries of "Kansas has broken" filled the hall. A six-point lead in a game like this, with but five minutes to go, looked like a certain victory.

The Kansans, huddled together in the middle of the floor, determined and desperate, planned their next driving attack.

The referee blew his whistle, and again the game was on. Using a smashing guard attack, Captain Endacott crashed through from tip-off

and dribbled his way to the basket for a field goal. In the next play, Black, the other Kansas guard, smashed his way through on the same identical play, on the other side of the court, and chalked up another counter.

On the very next play, Endacott on a dribble from tip-off repeated his stellar performance of a moment before and bludgeoned his way to another goal. The score was tied again—16 all. In three and one-half minutes the game would be history.

At this moment, Missouri, confused and bewildered, failed to call for time out. Another quick goal by Kansas brought the Missourians to their senses. They now called for time out.

Kansas appeared invincible. Missouri rooters pled and prayed. The Missouri Tigers swore they would not lose. Desperation everywhere! Exhilarating hell!

The whistle blew, and the game was on again. Missouri, overanxious, committed a foul; Kansas made it good. The score stood 19-16, Kansas. Kansas scored again. It looked hopeless for Missouri now, when a goal by the Tigers brought hope anew. The score was 21-18.

Kansas fouled; Missouri converted it into one point. Neither team missed a single free toss. Score 21-19, Kansas. Less than two minutes remained to play.

Bowman called Captain Endacott's signal for a smash through center. True to form, Enda-

cott took the tip from center, high in the air. Before he could alight, the Tigers, divining the play, drove to a clench. It was a held ball.

Referee Quigley threw the ball again into the air. Feeling that the time to play was short, Endacott "bulldogged" the ball for the rest of the game, refusing to let it get out of his grasp.

Sixteen times, the ball was thrown up; and sixteen times Endacott, after the tip-off, pounced upon it like a leopard on its prey. He leaped for it; he dived for it; he lunged and plunged, with no thought of his own physical being. The ball was the thing. He was conscious, only, of the two points that would tie the game.

A greater exhibition of man's doggedness was never witnessed before nor since. The timer's gun cracked, with Endacott and a Tiger still "bulldogging" the ball. The game was over. Not a substitution for Kansas. Kansas won.

But in the dressing room came the scene that a coach does not forget. I want to remember team spirit as I saw it there. The other players helped Endacott to the basement dressing room, where I, after penetrating an almost impenetrable crowd, saw him. He was sitting on a bench in a crouched position, his head resting in his hands and his elbows on his knees.

I walked up to him and slapped him on the back and said, "Wonderful work, Endy!" The other players halted me with, "Don't do that; he can't get his breath."

I discovered upon examination that the intercostal muscles, due to overexertion, had cramped. He had played himself out. It was then that I fully realized what he had given. We worked on him twenty minutes before we could get him comfortable.

This picture of these men who had given their all, bent over their team mate who had given part of his superhuman self, lasts.

It was a hard earned victory and called for no outward hilarity. The immediate cost had been too great. Such victories strengthen one's faith in the old slogan, "A team that won't be beat, can't be beat." The team that won this game did not need coddling. Real teams do not.

Not many teams will be forced to go twenty-four hours without sitting down to a real meal, and not many teams will be required to play four such games in five playing nights; but, if the exigencies of a season should necessitate such sacrifices, you will be given an opportunity to see a true test of the steel that is in your team machine.

It is a coach's delight to travel with a team composed of good sportsmen who will cheerfully accept the fortunes of travel, and who will, regardless of all vicissitudes, conjure up no excuses as alibis for lost games.

OBLIGATIONS

Abstinence an Asset to an Athletic Life—As a player and as a coach, I have never used tobacco nor liquor in any form. I make this statement, not as a braggart, because the after-dinner cigar has, throughout these years, constantly tempted me. As a lad in my early teens, I used tobacco; but when an athletic life lured, an appeal stronger than the desire to smoke, was the desire for a strong body.

During my years as a player, I could not afford to break training on my own account. I wanted to give to the game the best physical machine that I could build; for I wanted endurance, speed, agility, and all the things that help to make a good player.

Personal Habits Are Watched—During my years as a coach, I have felt that I could not afford to break over, because I saw in my first years of coaching life that my personal habits were constantly being watched and copied by my players; and I could not afford to fail.

A coach should not only direct; he should lead. Where he leads, his men will follow. This has been the big urge in my life to hold me fast to training rules. A coach has a right to expect total abstinence during the training season and has all the more right, if he, himself, trains. Consequently, if he can refrain from the uses of tobacco, he is fortunate, indeed. I have only

on the rarest occasions had infractions of training rules.

Never Curse a Player—Never curse a player, although in desperation, you may be forced to employ strong satire. No gentleman can be cursed without nursing in his heart a prejudice. Never appeal to men's prejudices. Always appeal to their loves.

On some occasions, however, most coaches are compelled to resort to anger and disgust, but only when no other appeal will bring the team out of a lethargy. Such inertia invariably comes when the team goes into the game overconfident. It cannot get going: sluggish passing; careless shooting; dull team work; no fight—playing like a bunch of old women at a game of tiddledywinks. At such times, stinging sarcasm must be employed to stir the men to action. If you will consistently study the temperament of your team, you will soon feel the times when the team needs to be aroused by ironical gibes. However, let me say that such occasions are rare. Twice only, in my experience as a coach, have I found this method in its extremity, expedient.

COMPENSATIONS

Never lose sight of your opportunity to direct by personal example, not only the habits of your men, but their reflected habits in a vast coterie of boy-worshipers. Always strive to be worthy of the trust imposed upon you. In the mind of

the boy, if a coach does a thing, it is all right, and if a star player does the same thing, it is better still.

Let no night be too dark; no task too forbidding; and no hour too late; for you who are out to make good, to go to your men if they need you. Willing and whole-hearted service will bring to you some of the best in compensations.

"Give to the world the best you've got, and the best will come back to you."

This is the truest message I can leave with you who are young in the game as coaches, or as players who may enter the coaching field.

Give Your All—No matter how your season goes, give your all—your best. Keep a stiff upper lip when discouragement palls, "and the best will come back to you."

Your Profession and Its Promise—Your profession holds little of gold or fame. True, if you win, you are a prince; if you lose, a pauper; but, at best, an "in and outer," who with average success has a means of making an honest living.

Finding Your Way—But a coach to the manner born should find no discouragement in this. Steady, persistent, willing service while finding your way will bring you at last to an enlarged horizon where the reach of your vision will be *from* the hilltop instead of *toward* it.

Your Vision Must Abide—Your vision must abide in rough going, else you cannot be to your players an inspiration. You must, time and time again, meet the knocker and hand him a knock-out wallop. Be always “up and at ’em” with the vision more in command. Your vision should be a sacrifice of love for your profession and for the opportunities that it offers in dealing with young men.

If Your Team Is Beaten—If your team is beaten some times, as all teams are, and you know that they have given their all; be kinder to them than usual. See that they have a splendid meal in a pleasant place. In every way show them that you are satisfied. It is not only their victory that you want; it is their respect and their best. Next time, you will get it.

The Satisfaction of a Handclasp Down the Years—The satisfaction of a handclasp of a friend, here and there down the years, when season after season is finished, is compensation enough. To have a man who has made good tell you (years after you thought that he had forgotten) that he would have quit many a time on an uphill grade if there had not flashed through his mind some of the never-quit athletic “pep” talks of other years, brings more comfort than does gold. To have been able to aid a man in forcing his will to obey, makes the game worth while.

Gold Does Not Measure the Best in Life—Education teaches us not to measure the best things of life by the standard of gold. The true coach must throw into his work an eager sacrifice for which no school can pay in cash.

At each commencement time, you will watch your players—the men you have learned to love—go out by graduation. Never get calloused nor indifferent toward the passing of these men who stand at this time, “happy because life’s mysterious adventure is before them, sad because they are leaving something beautiful behind.” For they are your concrete results. Out of these associations will grow deep and tender affections, not unlike the love of sons for a father who has been wise and kind.

In the After While—After the fretfulness of these zestful years of desire to win and dread to lose have passed away, your experiences as a coach will mellow and will strengthen your philosophy; and you, a veteran in the game, will desire to drift into serene maturity with the fruits of these deep affections that you have fostered along the way, as your truest satisfaction. These will be your compensations. The rest, the games you have played—the games you have lost, and the games you have won—will be as a dream.

PART II

CHAPTER VII

Athletic Injuries and Emergencies

The Team Physician—Every athletic team should have a team physician. Regardless of whether or not the coach or the trainer is a physician, every team in its major injuries should be treated by an outstanding physician of the town. Such a physician would be too busy to care for the details of training, such as taping and minor injuries; but he should be called upon for help in critical emergencies, or in cases where there is room for doubt in the diagnosis.

However, there is one exception to the team-physician plan. In cases of probable gravity, if the ill or injured athlete has a preference for the medical attentions of some town physician other than the one who administers to the team, the coach should see to it that this preference is gratified.

In the handling of dislocations, severe contusions and suspected fractures, the trainer or the coach should report these, at once, to the team physician or to the physician for whom the injured man expresses a preference. Let us say here for the benefit of coaches, trainers, and players, that all bad sprains should be treated as fractures until those in charge are otherwise assured. The use of the X-rays has become so trustworthy an authority in such troubles that

we think of it as a first aid. Indeed, it is the first aid in determining the proper line of treatment to pursue. Sometimes the cracking or the chipping of a bone is so minute that only the X-rays will show it.

The team trainer, even though he is a licensed physician should make no attempt to overstep his position. Due to the fact that his field of experiences in his profession is limited to the care of athletes, he can not be so proficient a diagnostician as is the practicing physician whose scope of experiences is wide. The player, backed by such confidence in the medical attention that he will be able to secure, will smash into the game with greater self-abandonment, because he is reliably assured that he will have the best of care, should injury come to him.

The Team Trainer and His Twofold Responsibility—The coach is the logical man to care for the injuries of his team provided he is mentally and physically equipped for the versatility and strenuousness that such a combined job implies. If a coach is not qualified to act as trainer for his teams, he should become so. However, a man handling the combined responsibilities of trainer and coach must be a human dynamo. Also, he must be sanguine, tranquil yet forceful, and clean. He must not know weariness and must be so steeped in his work that he will forget to save himself.

But a trainer when administering treatment for athletic injuries and emergencies must have more than a tranquil conscience and a clean personality. His duty as a trainer exacts from him a knowledge of the "finger tip" type; that is, information which has been stored away, yet can be recalled to meet any emergency at a moment's notice. The successful trainer must possess an accurate working knowledge of anatomy, physiology, and psychology. He should be able to see both the visible and the invisible in the player's life. He should so administer to the physical needs of his athletes that he can aid them in functioning as a part of a 100 per cent team machine; and he should so administer to their psychical needs that he will be able to see a steady mental and moral progression instead of retrogression. For no small part of a trainer's satisfaction lies in his ability to see in the lives of his athletes a gradual unfolding of the spirit of true gentlemen.

The coach who is his own trainer can utilize the time that he spends working with his men to implant constructive suggestions in willing and plastic minds. It is during such times of friendly intimacies that the morale of winning combinations can be established. The trainer, while working over the athletes, taping and bandaging them, and administering in other

ways, can get close to them in their confidential moods; and, as a result, he will find many naïve and ingenuous opportunities to build moral courage in his men. While he is treating the players' physical disabilities, a trainer who is serious in his profession can also treat their mental and moral lethargies.

A trainer should consider the mental lives of his charges in a system of causes and effects, and should at all times display whole-hearted sympathies and interests in their attendant hopes and fears. A real trainer should be equipped to study his players constructively in their many reactions of mental flow. He should be able to determine whether the emotions and judgments of some misguided player are the results of hereditary disposition or of suggestion; and with this decision weighed, he, guided by judgments which are the combined outgrowth of his training and his past experiences, should be able to pursue the wisest course of action.

The more of this form of psychotherapy that the trainer applies, the more valuable to his team he will be. And the more interested the trainer is in shaping the driving physical force of his men, the more keen will become his interest in them for their own sake.

Trainer Must Ask Questions—A high-grade athlete will seldom bother the trainer with his own ills. The trainer will be forced to draw

him out. The athlete will be thinking more of the injuries of team mates and will, unless watched, overlook some minor ill or injury of his own—often an ailment that might become aggravated with delay and cause trouble for the rest of the season. Therefore, a trainer must be a veritable “quiz box.” He must continuously inquire about physical imperfections during the entire season with such questions as:

“Let me look at that leg, Charlie?”

“Bob, how is that shoulder of yours? Let’s take a look at it anyway. We want to see how it is progressing.”

“Bill, are you exercising that ‘bum’ ankle? Use the heel and toe exercises regularly every morning and night to build up that weak arch and strengthen the ankle.”

Questions and directions constantly and unceasingly, much after the manner of a mother who is protecting her children from injury, is the order of the day and the order of the season for the trainer who meets with success. Such individual questions and directions will accomplish two things and probably much more. First, they will aid the trainer in finding the player’s physical weaknesses, thus giving him an opportunity to improve the athlete’s condition. Second, they will help the trainer to find the athlete’s strong points, and thus aid the trainer in retaining the athlete’s interest and loyalty. This

is a recognized asset to the trainer's balance sheet when the season is through.

In the following paragraphic discussions, only the problems of taping, bandaging, manipulations, and emergencies that the coach and trainer will meet with most frequently, will be taken up. Each accompanying plate is from a photograph of the bandage in actual service.

SPRAINS OR SYNOVITIS OF JOINTS

Webster defines, quite in a general way, a sprain as an "inflammation of a synovial membrane, usually accompanied with pain and swelling of the joint."

Dorland says that a sprain is "the wrenching of a joint with partial rupture or other injury of its attachments, and without luxation of bones."

†Moullin, on sprains, has this to say: "Generally speaking, the tissues on one side of a joint are overstretched and torn; those on the other compressed and crushed together; but there is always so much twisting, and such a difference in the strength and power of resistance of various structures, that unless the part is examined with the greatest care it is almost impossible to say what actually has given way."

For the limited discussion that we shall be forced to give, here, it is enough to think of a sprain as a temporary displacement followed,

†Moullin's Monograph on Sprains.

immediately, by a return to place, with a rapid swelling of the parts involved.

Hemorrhage of the blood vascular and lymphatic walls due to torn vessels is the primal cause of the immediate swelling of the parts after a sprain. This extravasation of the blood and lymph not only is present in the surrounding tissues but extends to the synovial wall and cavity as well. With prolonged rest, the joint will soon become immobile, the mass will become organized, and the result will be much discomfort and pain. Unless a sprain can be examined soon after the injury, due to the swelling of the affected parts, it will be difficult to determine accurately just what damage has been done. As stated previously, when in doubt as to the structural disturbance, treat the injury as a fracture until a radiographic examination has been made.

The function of the muscles and the ligaments is not only to hold the bones in place, but also to assist in the production of motion or the exertion of physical force. Either the muscles, the ligaments, or both, may be involved in sprains to a greater or lesser degree. If the ligaments should be the more seriously involved, the healing will be slower than the healing of a torn muscle, as the ligaments receive a lesser blood supply than the muscles.

Coaches and trainers are probably more often called upon to treat sprains and consequently to restore function to the parts involved in sprains than to administer to any other athletic injury. For this reason, the treatment and bandaging of sprains has been dealt with at greater length than has any other injury.

First Step in Treatment of Sprains—After thoroughly examining a sprain, carefully adjust any soft tissues that have been displaced. Relax all contractions by a light massage, using passive movements in order to reduce and to combat hemorrhage and swelling. Take extreme care to see that there are no displaced cartilages, ligaments, tendons, or muscles. Be very careful in these manipulations not to pommel the involved area. ,

After this preliminary examination, the application of an ice bag is a good practical treatment. Or cold water constantly poured over the involved area for about twenty or thirty minutes will accomplish about the same result.

When the skin commences to dull and blanch, the maximum benefit from the cold applications has been secured. Now extreme heat should be applied for about the same period of time. This applied heat will relax the muscles so that a better circulation will follow. After the lapse of another thirty minutes in which the heat has been applied, use cold and heat, alternately, for

shorter periods of time to serve as a douche for tonic effect. This alternate application of heat and cold is only temporary and should not be continued excessively, else an opposite effect will ensue.

Bandaging—Second Step in Treatment of Sprains—After the execution of these preliminaries, bandaging the sprain is the next step in the treatment. Always apply the bandage from the extremity toward the trunk and always be sure that an even pressure is being secured. Unless the latter point is observed, the bandage will not give the desired service to the weakened part.

Almost a score of the various devices and schemes for specific bandaging of strains, sprains, and stretched tendons are taken up in this chapter under marginal topics which will indicate the photographic plate designating the particular bandage. This outlined discussion of bandaging is considered at this particular time only to indicate that bandaging is the second step to pursue in the treatment of sprains. Sprains of the toes, sprains of the ankles, sprains of the knee, sprains of the wrist, sprains of the hand and of the fingers will each be treated separately under the heading of "Taping and Bandaging," after the third and fourth steps in the treatment of sprains have been outlined and discussed. This plan has been

adopted for the discussion of sprains in order to avoid a break in the continuity of the various steps of the treatment of such injuries.

Activity—Third Step in the Treatment of Sprains—Do not rest an injured joint too long. The function of a joint is movement. If a healthy joint is immobilized for a prolonged period, rigidity and stiffness will occur. Passive movements should be used from the second day of the date of the injury until the injured player can execute active movement without pain.

†Mumford says, "Immobilization for more than a few days, as under the old methods, is objectionable, because adhesions are apt to form, thus causing impairment of function."

*While Holder Sneve in the "Journal of the American Medical Association" states that, "Immobilization of muscles is not rest. On the contrary, in all sprains the muscles should have passive exercise during the first few hours and days and active exercise after that. In the majority of cases active exercise should be instituted from the beginning. The plaster cast should not be used at all, even in cases where we have a fracture unless it be impossible to maintain a proper position of the joint."

‡Moullin has the following to say in his chapter on "Manipulation and Massage," "To carry

†Reference Handbook of Medical Sciences—reference to Mumford.

*Journal of American Medical Association, June 1, 1901.

‡Monograph on Sprains, Moullin.

manipulation out effectively two things are needed beyond all others. The one is a sense of touch so delicate that it can appreciate the least resistance or irregularity of movement; the other an accurate knowledge, not merely of the ordinary anatomy of the part but of the different degrees of tension that fall on the ligaments in every position of the limb. Each joint requires a different kind of manipulation according to its construction. There should be no jerking. The movements must be vigorous and forcible, but perfectly smooth; and they must be carried out thoroughly, the joint being moved to its full extent in all directions that are natural to it. Each kind of action should be combined successively with the rest, one by one, so that the tension may fall in turn upon all the different parts of the capsule of the joint. Recent slight adhesions give way at once without a sound though the sensation is generally conveyed to the hand. When they are older the noise may be as loud and clear as when a bone is broken."

Massage of Sprains—Fourth Step in Treatment of Sprains—So conclusive is Moullin upon this subject of massage that he is being quoted from the same text to express what the writer, as a trainer, has found to be true. "Massage in the strict sense of the term is a great deal more efficacious than manipulation, especially

with older sprains. Its action is not limited to the skin and superficial structures. These undergo immense changes, it is true; they become softer and finer while under manipulation; their strength and elasticity increase, the extreme tenderness diminishes, and the natural appearance and texture return. The surface loses its dry, harsh character and becomes warm and moist again; the livid bluish color gives way to a brighter hue, and the deeper layers of fibrous tissue yield and stretch so that the hide-bound shrunken condition that is often present after long disuse gradually passes off. But the good effect is not by any means limited to, or even most conspicuously shown by this. When properly carried out, massage exerts a simultaneous influence on muscles, nerves and vessels: in fact, on all the tissues within its reach.

"The circulation is the first thing to feel its power. It has already been explained how, after prolonged rest, the blood, as it were, lies almost stagnant in the tissues, slowly circulating through them, and neither giving them sufficient for their nutrition, nor removing from them the waste products of their action. This is changed at once. The life of the part is quickened. The veins and absorbents are emptied first, and the fluid they contain driven out into the heart, which fills more rapidly, and contracts more vigorously and firmly. Then

the pressure falls in the smaller vessels, and the tiny irregular spaces, full of lymph, which extend in all directions through the tissues. These, in their turn, are compressed and mechanically emptied, their contents being driven on into the empty vessels, from which any backward flow is prevented by the valves. The circulation becomes more rapid; nutrition is carried on with greater energy, and the actual amount of the blood in the tissues at any one time so much increased that they become full and soft to the touch and regain the even and rounded contour of active health.

"It is most essential to commence as gradually and as gently as possible, only working on the deeper tissues after the more superficial ones have become thoroughly accustomed, and have been unloaded of their surplus fluid. The skin, the soft subcutaneous tissue, the muscles, and the deeper layers, must all be worked in turn. Nor should the manipulation be confined to the injured part. In a sprain of any standing, the whole of the limb is affected more or less. It is usually better to devote attention first to the parts nearer the trunk than to deal with those around the injured area, and only afterward when the circulation is thoroughly re-established, to manipulate the joint itself.

"The tendency is to make the sittings last too long. Deep manipulation itself rarely requires

more than *five minutes*; but in dealing with a recent injury, it may be advisable to spend a longer time than this over the friction and other preparatory measures, so that a quarter of an hour soon passes by. When the tenderness is very great, and the amount of swelling excessive, much longer than this may be necessary; but short, frequently repeated sittings are of greater benefit than one long one. A skillful operator, too, will often effect more in a few minutes than an ordinary rubber will in as many sittings."

MOIST AND DRY HEAT FOR TREATMENT OF SPRAINS AND BRUISES

Moist Heat—In the treatment of sprains, bruises, and contusions of all sorts, heat is indicated. Moist heat if properly applied, is very effective as a therapeutic agent. When used in a baking machine and under proper care, it is invaluable for the athlete's injuries. But moist heat applied under improper conditions is beset with disadvantages. Especially is it difficult to use during the night, unless the athlete is under the care of a special nurse who will see that the danger of too rapid cooling and chilling of the body is eliminated.

Moist heat is not effective unless it is intense heat. Medium hot towels accomplish little, if any, good. Intense heat is a deep heat

and is, therefore, effective in the treatment of deep bruises and sprains.

During the injured player's waking hours, you can apply hot fomentations of boric acid (saturated solution) and alcohol (equal parts) to the affected areas with good results. This solution should be applied hot on Turkish towels, which should be kept as hot as the skin will stand. Three Turkish towels will be needed for the applications in order to make the alternations successful. Leave the first towel on during the entire baking process, but alternate the second and third towel by forking each one out of the near-boiling liquid and applying it while it is still as hot as your hands can stand. Over these fomentations, keep a dry woolen blanket so that the heat will be held within. These baking processes should last one hour at a time and should always be followed with an alcohol rub so as to close the opened pores. It is also well to apply Athletic Liniment copiously over the tender area after the baking, as this will relieve the soreness of the injury by quieting the sensory nerves.

Also, either Campho-Phénique (liquid) or Anagelsic Balm may be used as alternates when one or the other non-irritants loses its effect.

Dry Heat—On account of the disadvantage caused by the too great radiation of the skin under moist heat applications and the consequent

risks of congestion incurred therefrom, also on account of the inconvenience attached to the application of moist heat, dry heat has become the trainer's friend.

The common incandescent light bulb, the electric heating pad, and the therapeutic lamp are all dry heat agents that the athlete can administer to himself with gratifying results. The only inconvenience that might be incurred by the use of dry heat would be a too complete drying of the tissues of the skin. This could happen only from a too prolonged use of dry heating methods and without any diversity of moist heat whatsoever. The use of hot fomentations during the day and dry heat at night makes an ideal baking schedule for the athlete, when such treatment is indicated. Olive oil rubs will overcome any excessive dryness of the tissues from the intense dry heating.

In fact, dry heat has practically all of the advantages of moist heat in the treatment of athletic injuries, with none of the disadvantages.

The use of an electric heating pad is indicated in almost all sprains and bruises. Such pads are flexible and can be bound around the joint or other affected area of an extremity and can be left there during the sleeping hours. The heat can be so regulated that an even and comfortable temperature can be maintained.

Even the use of an incandescent light bulb is splendid if the athlete uses it while he is awake and can so guard the light that there is no danger of fire. However, it would not be advisable to use such a heating agency after going to bed as the hazard taken with fire would not justify its use.

Therapeutic Lamp—A large sized aluminum bell-shaped therapeutic lamp with a five hundred candle power globe is a valuable dry heat agent to use in the dressing rooms. The heat rays from such a lamp will penetrate from one-sixteenth to one-half an inch, owing to the effectiveness of the lamp.

There is little danger of blistering the skin by the use of such a lamp. When the tissues of the skin get excessively warm, stroke the heated area gently with the hand. This stroking of the skin will so diffuse the capillary circulation that for the time being, the uncomfortable sensation to the skin will be lessened.

For a Charley horse, weak knees, or strained shoulders, this therapeutic lamp is indicated. By using this lamp before a massage or a manipulation is attempted, you will get the deeper structures well relaxed. All massage should be around and away from the part and never directly over it. Massaging the bruise itself will only tend to aggravate it.

TAPING AND BANDAGING

The trainer who desires to use adhesive tape efficaciously should know where to find the ligamentous attachments to the bones. Every trainer should know the origin and insertion of the principal muscles as well as their nerve and blood supplies. Such knowledge is not difficult to acquire if a trainer is concerned enough about improving his art to give as much as an hour each evening to the study of anatomy. He should also know the spinal divisions clearly enough to manipulate artfully for aid in the correction of athletic injuries and emergencies. In sprains and other emergencies, adhesive tape is the trainer-coach's best friend. Practically every injury, with the exception of a fracture, can be taken care of by the artful and intelligent application of tape.

Adhesive tape should be administered with the thought that, on account of the ligaments being weakened by the sprain, the tape must aid in the functioning of the impaired tissues.

Positively discourage the excessive use of adhesive tape and other bandaging. Try to establish a standard that the best athletes are those that require the least attention. We, as coaches, are not training prima donnas but are trying to develop fighting men, with courageous hearts. Men with nerve who will not whine when they are hurt.

Some athletes wear tape bandages for decorations. But these men who are constantly encased in plasters or supports are ordinarily the "grand stand or alibi" type of athletes. Sanguinary and determined temperaments are the ones needed on real teams.

In the following directions on bandaging, an attempt has been made to show only the most important uses of adhesive taping in athletic sprains and other injuries.

BANDAGING SPRAINS OF THE FINGERS

Sprains of the fingers are probably the most common of the athlete's injuries. The thumb, the ring, and the index fingers are the members usually involved.

Plate
100

When a finger is sprained, tape the shorter injured member to the longer approximate uninjured one. In the case of a sprain to the middle finger, tape it to the index finger, which is not so long as the middle finger itself; but, on account of the more compatible attachments of the flexor tendons of these two fingers, this connection gives more freedom of movement than if the taping were made to the ring finger, its other neighbor.

This plan of taping the shorter injured digit to the longer uninjured one gives full protection to the weaker digit. If the little finger is sprained, bandage it to the ring finger. If either

the ring or index fingers are sprained, bandage to the middle finger.

The Bandage—Use thin narrow strips of adhesive tape, not more than one-fourth inch wide and four and one-half inches long, to bandage the sprained finger. By using this narrow bandaging tape, you will not restrict the full freedom of the joints. Usually, it is better to tape in a simple circular fashion as shown in Plate 100; but occasionally it will be expedient to tape one of the injured fingers spirally to aid the injured capsular or collateral ligaments of the joint. After either style of taping, the finger should be strapped circularly to its fellow by a thin strip of adhesive tape. In Plate 100 the circular strapping has been effected on the middle and index fingers, and the spiral strapping on the ring finger.

No taping should be so tight as to interfere with the blood supply or with the mobility of the joint, beyond a restriction that is consistent with full protection of the member.

By referring to †Spalteholz's Anatomy, you will get so clear a discussion upon the ligamentous attachments of the metacarpal bones and the phalanges that you can readily see why such taping of the digits as outlined above is expedient. Space forbids such a complete discussion here.

†Hand Atlas of Human Anatomy, Werner Spalteholz, Vol. I, Page 191.

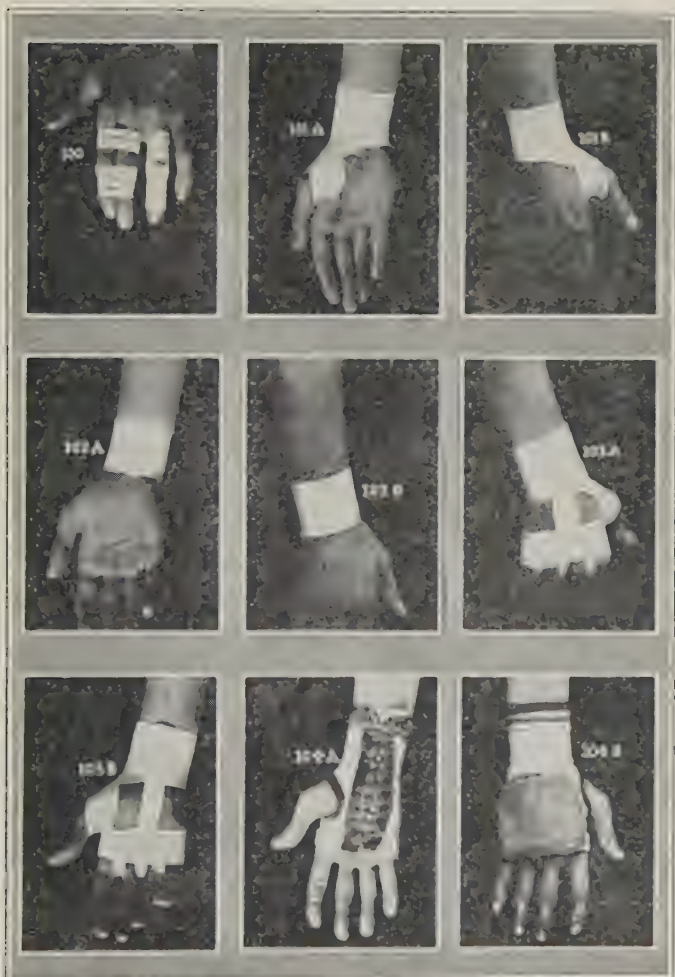


Plate 100, Sprains of Fingers.

Plates 101-A, 101-B, Combination Wrist and Thumb Bandages.

Plates 102-A, 102-B, Bandages for Severe Sprains of the Wrist.

Plates 103-A, 103-B, Combination of Transverse Glove Bandage.

Plates 104-A, 104-B, Canvas Glove with Leather Back Support.

COMBINATION WRIST AND THUMB BANDAGES

Basket Weave

Plates
101-A
101-B

Sprains of the Thumb—Beginning at the inside surface of the thumb joint, use three-eighth inch strips of adhesive tape in a basket weave around the thumb, ending in a swing back on the hand and around the wrist, as shown in Plate 101-A.

Overlap each strip of adhesive tape used in the basket weave about one-third of its width. It is much better to start the bandaging with short strips, beginning each one on the inside surface of the thumb and then swinging back and forth around the thumb as shown in Plate 101-A, than it is to take a longer piece of tape and endeavor to bring this long piece around the thumb each time in a figure of eight. Such an attempted figure of eight will cause the tape to roll up on the inside of the thumb and thus necessitate an awkward and clumsy movement when the thumb is in action.

When the bandage is finished, place a short piece of adhesive tape over the starting point of the bandage. This additional strip will secure the bandage and will also protect it from being loosened around the thumb joint by water when the hand is washed.

Secure the ends that were extended around the wrist with a two-inch circular adhesive tape

wrist bandage, which will be taken up in the continuation of this combination, Plate 101-B.

Should the fleshy part of the thumb have been bruised when the thumb was sprained, swing additional strips of tape out over the palmer surface of the thumb and draw them back around the wrist, where the ends of these additional strips should be entirely covered by the wrist bandage.

Sprains of the Wrist—Often the wrist is sprained conjointly with the thumb. Whether the wrist is involved in the injury or not, the basket weave thumb bandage works most satisfactorily with its combination wrist bandage to act as a support.

This wrist bandage supports the anterior and posterior ligaments of the wrist when there is injury, as well as fixes the thumb bandage and keeps it from giving way.

Before applying the wide strip of tape to the wrist, place a cigarette roll of cotton on the front of the wrist between the two bones of the forearm. This is done to insure an adequate return circulation of the blood. Then apply the bandage proper, using a strip of tape from two to two and one-half inches wide. The ends of this wide strip should overlap at least three inches.

After the bandage is set, bind two narrow strips of tape, each one-half inch wide, around

the edges of the bandage to reinforce it and to keep it intact when the bandage comes into contact with soap and water. This is an especially good bandage for football and basketball injuries of the wrist.

BANDAGING SEVERE SPRAINS OF THE WRIST

Plates
102-A
102-B

In a severe sprain of the wrist, there is a strain of the annular ligaments across the volar (front) surface of the wrist and a wrenching of the dorsal carpal ligament. These two ligaments give great support to the flexor and extensor tendons of the forearm. By firmly encircling the left wrist with the thumb and finger of your right hand, you can easily see from the support that you give the wrist, how much, a firm brace, artfully applied, will strengthen this area when it is weakened by a sprain.

The Method: The main features of this wrist bandage are similar in detail to the wrist bandage previously discussed in the combination bandage, except that the other bandage, unless in cases of severe sprain, need not be so carefully applied. In many instances, it will act only as a support for the thumb bandage. But this bandage under discussion is for severe sprains of the wrist.

In this bandage, as in the previous one, use the cotton cigarette roll between the radius and the ulna on the volar surface of the wrist. Fit this roll snugly between the tendons of the

flexor carpi radialis and the palmaris longus muscles (muscles of the forearm and hand) to safely insure the return blood circulation to the heart.

Use for this bandage a strip of adhesive tape, varying in width (according to the size of the wrist) from two to two and one-half inches, and in length (varying for the same reason) from ten inches to one foot.

Lap one end of the bandage over the cigarette roll—about one inch past the center of the wrist. Hold this loose end in place with your thumb and index finger while you draw the bandage very firmly around the wrist.

Just before completing the circuit of the tape around the wrist, press downward and forward with your thumb on the tightening bandage in the direction in which the tape is being applied. This sets the bandage and makes it fit more snugly.

Bring the bandage down on the wrist as close to the hand as is possible without interfering with the flexion and the extension of the wrist joint.

Even if the wrist is covered with hairs, never place gauze under this bandage. It is well to shave the wrist before bandaging, but many situations arise for which this bandage is indicated and in which there is no opportunity to previously prepare the wrist for the bandage.

The advantage of attaching the tape directly to the skin is that this method sets up a natural massage which assists in restoring normal function to the wrist. The skin, by the application of the adhesive tape, is fixed. With every movement of the wrist, its muscles ply beneath the skin; hence, a continued natural massage to the injured wrist results.

Tape should always be applied to joints with the thought of making an adhesive brace serve as a substitute for torn ligaments and tendons.

If the sprain is very severe, you can further strengthen the wrist by applying additional adhesive bands to the bandage already set. These added strips should be about one-half inch wide and eight or ten inches long. Continue to draw these around the wrist until you have the brace as tight as you desire.

If the hairs of the wrist should pull at the edges of the bandage after it is set, run a blunt instrument around and break them off, so that there will be no discomfort to the player in his wrist movements.

COMBINATIONS OF TRANSVERSE GLOVE BANDAGE

Plates
103-A
103-B

This bandage can be used when there is a sprain of the thumb, wrist, or transverse arch of the hand. It has a threefold advantage when properly applied. It allows full freedom of movement of the hand, serves as a splendid pro-

tection against further injury, and gives added strength many times when it would otherwise be impossible to pit the hand against resistance. This bandage is especially helpful when the metacarpal bones of the hand and tissues surrounding them have been strained or sprained. The hand technique of the basket-ball player is not handicapped in the least when this bandage is used.

The Bandage: Wrap a strip of adhesive tape one and one-half inches wide and twelve inches long firmly around the palmer (front) and dorsal (back) surface of the transverse arch (the hand). The fit of this transverse strip should be snug. To keep this strip of bandage in place, run small strips of adhesive tape three-eighths of an inch wide and three inches long between the fingers. Attach these narrow strips of tape to the back and to the front of the transverse bandage.

For the attachment of the bandage from the wrist to the palm on the volar (front) surface, use a strip of tape two inches wide and eight inches long. Fold this tape with the ends uneven and the adhesive surface approximating so that you have a loose end left. Slip this end under the wrist bandage for an attachment there. Push the other end under the transverse bandage for attachment at the palm, where it can be secured by an additional piece of tape. Repeat

this same process when adjusting the posterior strip on the dorsal surface of the hand.

It is impossible to use this type of glove bandage unless you also apply the wrist bandage using the cigarette roll. There would be no place to anchor the glove supports without this wrist bandage.

When this type of bandage has been properly adjusted, the hand can be immersed in hot water without loosening the bandage supports. After adjusting a bandage of this type, it is a good plan, although not entirely necessary, to use another piece of adhesive tape over the loose end already anchored to the front wrist bandage. This further insures against the bandage working loose.

CANVAS GLOVE WITH LEATHER BACK SUPPORT

Plates
104-A
104-B

Coaches and trainers can easily make many of their own braces and supports. The trainer should have at his disposal a heavy sewing machine that will stitch either canvas or leather goods.

The eyelet and thumb bands of the glove shown in Plates 104-A and 104-B were made from an old punching bag cover. The canvas used in the glove was found among scraps of waste materials.

The leather used in the posterior view of the glove (Plate 104-B) was taken from a dis-

carded basket-ball cover. A piece of paper fibre coated with Acetate Dope 104 and dried well before using, was inserted beneath the leather, which was then stitched to the back of the canvas glove.

In games in which there is possibility of injury to a hand that is either weakened from a former injury or is in need of additional protection on account of a recent injury, such a canvas glove as the one shown in the two previously mentioned plates is economical, durable, and effective. The front lace makes it easy to adjust.

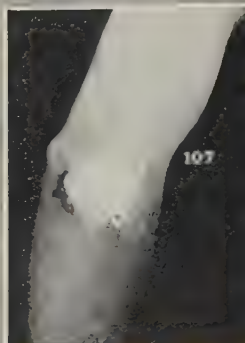
This glove, combining the qualities of lightness, durability, and strength, makes an ideal glove for many purposes. A player wearing this type of glove is not handicapped by clumsiness because he has complete use of the wrist, fingers, and thumb. He is, at the same time, assured full protection for the back of the hand. In football scrimmages especially, in which there is repeated danger of the hand being stepped upon, this glove is invaluable.

ACETATE DOPE CAST FOR HAND AND WRIST

Plates
105-A
105-B

A new feature in athletic braces has been discovered. It is the use of Acetate Dope 104 in their construction. This Dope can be obtained from the Perry Austin Manufacturing Company, of Grasmere, Staten Island, New York City. The price is about \$4.00 for a half-gallon tin. This material comes in liquid form but when applied dries very hard. It is most extensively used on aeroplane wings. This fact is evidence enough of its qualities of extreme resistance.

Directions for Using the Acetate Dope in Casts: After clothing the wrist, hand, and arm with a layer of cotton about one-sixteenth of an inch thick, apply a gauze roller bandage over the desired area. You will not need to employ the spiral reversed bandage in wrapping the joint, hand, and arm in this case, for the Dope will cement and hold the bandage. Then apply with a one and one-half inch varnish brush, the Acetate Dope 104, to the entire surface of the gauze bandage. If more than one coat is needed to give greater firmness and weight to the bandage, apply as many coats as are desired. As high as ten coats may be used, but three coats are usually all that are needed. It will take about thirty minutes for each coat to set. Do not apply an extra coat until the previous one is thoroughly dry.



Plates 105-A, 105-B, Acetate Dope Cast for Hand and Wrist.
Plate 106, Spiral Reversed Bandage for Forearm and Arm.
Plate 107, Flexible Collodion Patch.

After the first coating has partially hardened, the bandage should be cut. Use a pair of blunt surgical scissors to cut the seam along the middle front of the wrist, hand and arm. By the time that the cast is cut, it will have hardened enough so that the next coating may be applied. Three applications of the Dope will make the bandage as hard as plaster of Paris; and in addition to firmness, it will have lightness—a quality so much to be desired in bandaging.

In finishing the cast for use, turn a three-inch strip of adhesive tape over each of the edges of the cast, where it was cut for the opening. These strips of tape will supply the surface for the eyelet bands. The openings for the thumb and ends can be treated in the same way with adhesive tape.

After the adhesive bands have been placed and the eyelets arranged, apply to the cast its last coating of the Dope. This will set the adhesive tape and make it an integral part of the bandage. This structure now becomes practically as strong as canvas. By testing the strength of the wing of an aeroplane, you will be able to appreciate what resistant qualities this Dope has.

By folding crosswise a piece of adhesive tape two inches wide and twelve inches long, with the adhesive surfaces approximating, you can make a six-inch tongue similar to the tongue of

a laced shoe. Stitch the tongue to one side of the cast lacing. This will protect the wrist against the pressure of the eyelets and the laces. Adjust the bandage by tightening or by releasing the laces.

Remember in making this cast that the entire inner surface must be covered with cotton. The Dope will not penetrate the cotton but will leave a downy, pliable surface that will come into contact with the skin area. In cases of injury to the hand and wrist, when any pressure against the palmer surface of the hand throws the wrist back and causes additional pain, this is a most desirable cast to use, as it protects against such a jar.

Such a cast is lighter than aluminum, and more pliable, yet more tenacious than leather. This new feature of athletic support has manifold possibilities. With Acetate Dope 104 at hand, a trainer with ingenuity has opportunities to work out plans for almost any type of athletic casts and braces.

SPIRAL REVERSED BANDAGE FOR FOREARM AND ARM

This bandage shown in Plate 106 is a gauze bandage primarily employed to hold applications of unguentine and antiphlogistine in place. It is especially desirable for clothing the arm with an ointment dressing for an overnight application.

Plate
106

Directions for Application: To keep the unguentine from working through the gauze, apply a pad of cotton over the area involved. In the bandage itself, use a roller of gauze two and one-half inches wide and ten yards long. In the first step of the application of the gauze, take two revolutions around the wrist, always drawing the bandage toward you. Once the bandage is started, ascend the forearm by spiral reversed turns and cover the elbow in a figure of eight. End the bandage on the upper arm by two circular turns around the arm and fasten the loose end with a strip of adhesive tape brought over the end of the gauze and circularly around the arm.

Should you have trouble with the spiral reversed bandage separating or slipping off during the night, wrap strips of adhesive tape one-inch wide spirally around the arm. This will hold the bandage together and will keep the ointment in place.

FLEXIBLE COLLODION PATCH

Plate
107

This patch is especially desirable when it is difficult to make adhesive tape hold a bandage in place. The joints of the elbows and knees, as well as the surfaces of the forehead and face, are difficult areas to bandage successfully. Burns, boils, and abrasions are ideally protected by using this type of patch.

When an athlete is forced to bend a joint which is in close proximity to a laceration of any type, the movement will cause a cracking of the injured surface and will produce pain. Under such conditions it is very much better, after careful washings with penetrating antiseptics, to use ointments that will keep the tissues around the wound pliable.

Directions for Applying the Patch: When the affected area has been thoroughly cleansed with a reliable antiseptic, apply some such ointment as unguentine or campho-phénique salve in reasonably liberal quantities. Always place a pad of gauze directly over the ointment. Then take a thin piece of cotton, separating it by layers, and work the fibres apart so that the cotton will form a very thin covering over the gauze. See that the cotton covering is kept thin so as not to have a clumsy patch. Let the edges of the cotton extend beyond the edges of the gauze about an eighth of an inch.

The patch is now ready for the application of flexible collodion. Immerse in a bottle of flexible collodion a wooden applicator or a toothpick with fibrals of cotton wound around the end. The cotton will pick up and hold enough collodion to supply an excess, which will be deposited upon the patch. When applying the collodion, hold the applicator between the thumb and the index finger and roll the applicator away

from the center of the patch so that the collodion will extend over the edges and thus cover the entire surface without the edges being rolled up, as would be the case if the collodion were rolled from the outside toward the center. Never try to daub the collodion on, as you will attach the dry particles of the cotton fibrals to the applicator and make a mess of your efforts. Continue this process of rolling the collodion on the patch until enough is added to hold it in place and to keep the unguentine from oozing through. This patch can be guaranteed to hold for several days on any skin area.

After a game, redress all wounds (excepting burns) with some worthy sterilizing agent, followed by an application of dusting powder. Either boric acid or Campho-phénique dusting powder are reliable agents. Cover the powder placed upon the wound with gauze and a thin piece of cotton, as was done when ointment only was applied. This time, deposit the collodion on the edges of the patch, only. Put no collodion over the top center of a dry powder dressing. Such treatment would shut out the air from the wound and would prevent its healing.

If an abrasion should be caused by a lime-burn on the football field or by a floor-burn on the basket-ball court, do not use a dry dressing; but use daily applications of ointment dressings

instead. Unguentine has possibly come to be known as the first word in the treatment of burns.

In the treatment of boils and carbuncles, a practicing physician should have complete charge. On account of the sequelae in such cases, specific treatment is indicated. There is danger of spreading the infection to other players, when boils and carbuncles are handled in the dressing rooms with limited and often inadequate facilities. However, should you find it necessary to open a boil, first paint the entire area involved with iodine and immerse the scalpel, or knife, in a bottle of phenol (carbolic acid) for several minutes before using it. When opening the boil, do not drive the knife through the sides, but place the point down into the center of the boil through the crater. You will find upon investigation that the leucocytes have built a hard barrier or wall around the infection and that there is a cavity in the center which contains pus. Never open a boil or a carbuncle unless the center is soft, but keep the parts asepticized and poulticed until you can bring the boil or carbuncle to a head.

When opening the boil, probe the point of the scalpel into the center about one-fourth or one-half an inch deep and then force the sharp edge of the knife through the outer wall. Repeat this operation on the opposite wall, in order

to establish a good drainage. When the proper incisions are made, insert a wooden applicator, the end of which is wrapped with cotton and treated with carbolic acid, into the crater. Remove this applicator and follow it immediately with one that has been resting in grain alcohol. The alcohol will neutralize the further action of the carbolic acid upon the tissue. The carbolic acid will cut away the tenacious tentacles of the carbuncle or the boil, and the alcohol will check the progressive destruction of tissue by the carbolic acid. After this preliminary treatment, apply a copious amount of Camphophénique powder. Then cover the whole area with a piece of gauze, and add the usual thin piece of cotton to the top. By using the flexible collodion on the edges only, you will have a bandage that will keep the power in place and at the same time will allow the curative reagents to work at maximum speed.

After twenty-four hours, remove this dressing, and you will, except in rare cases, be able to lift out all of the remaining infectious substance at once. Continue the use of a dry dusting powder until the cavity is entirely closed and healed.

TACKLE FOOTBALL OR LAME BASEBALL SHOULDER BANDAGE

Plate
108

This bandage will support the weakened muscles of the shoulder girdle, as the strain al-



Plate 108, Tackle Football or Lane Baseball Shoulder Bandage.
 Plates 109-A, 109-B, Battering-ram Football Bandage.
 Plate 110, Bandage for Painful or Cracked Rib.
 Plate 111, Surgical Strips for Cut Above the Eye.

ways comes at the juncture of the clavicle and the scapula. The so-called broken shoulder, tackle shoulder, and knocked-down shoulder are generally only strains of the acromio clavicular articulation (juncture of clavicle and scapula—top point of shoulder). This bandage will relieve the pain caused from the strain of the loose hanging arm. In this injury, adhesive tape correctly applied will aid in the functioning of the weakened ligaments.

Directions for the Bandage: Apply a strip of adhesive tape three inches wide and six inches long transversely on the outside of the arm at the insertion of the deltoid muscle, which is eight inches below the top point of the shoulder. This strip will serve as the lower anchor for the longitudinal strips that will be applied. Another anchor piece ten inches long should be taped across the shoulder near the juncture of the shoulder and the neck. This strip will serve as the upper anchor for the longitudinal strips. Before applying the longitudinal strips, force the arm up alongside of the body to obtain a complete relaxation of the shoulder muscle. Support the arm in this position until the longitudinal strips have been applied. Now apply five longitudinal strips of tape three inches wide and twelve inches long to the anchor tapes at the deltoid and at the neck. Bring these strips up the arm and over the shoulder, firmly press-

ing them into place. After the longitudinal strips of tape have been brought up over the point of the shoulder, split each one into halves and bring one half to its attachment in one direction and the other half in the opposite direction. This is done to avert the inconvenience of the tape wrinkling across the shoulder which will occur if this precaution of splitting the longitudinal strips is not followed.

After the arm bandage is in place, attach three additional pieces of tape eight inches long and three inches wide to the back of the shoulder. These strips should be attached from the inferior angle of the scapula across the point of the shoulder to the clavicle, thus drawing the scapula (shoulder blade) closer to the clavicle (collar bone). Then attach two additional strips of tape six inches long and three inches wide from the front of the chest across the clavicle to the spine of the scapula. Be very sure when applying this bandage that the arm is supported during the entire process by a rest that will give a full relaxation of the muscles of the shoulder.

When the bandage is finished, secure it by outside coverings of strips of tape three inches wide, both at the insertion of the deltoid and at the top of the shoulder near the neck. It is these outer strips of tape used to secure the bandage that are seen in Plate 108. The pri-

mary anchor strips are beneath these strips, which really serve as secondary anchors for the bandage proper. In no case, allow these arm anchor strips to completely encircle the arm as they would cut off the circulation of the blood.

BATTERING-RAM FOOTBALL BANDAGE

Plates
109-A
109-B

This bandage is designed with the intention of making the football player a battering-ram. After affixing tackle foot-ball or lame baseball shoulder bandages on both shoulders in the manner described in Plate 108, it is comparatively simple to add the necessary additional transverse strips used in the battering-ram bandage. These additional strips applied to both front and back will strengthen a player's shoulders, decidedly.

Plate 109-A shows how two strips of three-inch adhesive tape are drawn over the top of each shoulder and down to the front of the chest. Two additional strips of three-inch adhesive tape are brought across the front of the chest and adhered to the over-shoulder bandage. These lateral strips are also shown across the chest of the player in Plate 109-A.

Plate 109-B shows the scheme of running three three-inch strips across the back from the outside of one shoulder to the outside of the other. This draws the shoulders closer together, yet leaves plenty of freedom of movement when

the player raises his arms. When the arms are dropped again to the sides, the tape thus affixed forms an encasement for the player and aids in absorbing and resisting the shock of a force thrown against the front of the shoulder and the chest. Not only is this bandage helpful to a plunging back-fielder but also to a lineman as he withstands the shock of a gruelling line-plunging team.

Such a bandage should be worn only when a player's shoulders are in bad shape or when a line is forced to meet much heavier opponents with a crunching back-field plunging attack. This bandage is seldom, if ever, used in basketball.

By using special exercise methods, such as the dip on the fingers every morning and night, a player can build up a splendid resistance to shock and force. Refer to the section on "Training and Conditioning" in Chapter I for prescriptions of exercises used in developing special muscle groups.

PAINFUL OR CRACKED RIB BANDAGE

The so-called cracked rib or pain in the side is common to players who engage in games of contact and combat. The intercostal muscles and intercostal nerves are often injured or inflamed by such collisions, and thereby cause great pain upon any movement of the thorax.

Many so-called pleurisy pains are results of slight injuries or sprains of these intercostal tissues contracted in athletic contests.

Many times a runner is susceptible to lancinating pains in the side due to a cramp of the intercostal muscles. Manipulation and bandaging will readily alleviate such suffering.

The course of the ribs and their relation to each other in the thorax should be carefully studied in order to apply this cracked rib adhesive tape bandage artfully.

Directions for Applying the Bandage: Start the bandage at the juncture of the abdomen and the front of the ribs. In this instance (Plate 110), the bandage is started at the juncture of the right ribs and the abdomen, near the extremities of the lower ribs.

Beginning at the place indicated, draw several strips of three-inch tape obliquely upward and backward, around the dorsal surface of the thorax and overlapping the spine far enough to give the tape a substantial mooring. This attachment of the tape across the spine and to the angles of the opposite ribs secures the desired immobilization of the injured area and thereby lessens the pain, upon body activity.

A three-inch accessory adhesive strip over the right shoulder from the rear attachment of the primary bandage to the front of the chest and abdomen serves further to limit the action of

the ribs. See Plate 110 for the location of this shoulder strip.

To aid further in holding this bandage in place and also to obtain from it the maximum benefit of immobilization, use two or three (as many as are consistent with the weight of the primary bandage) three-inch strips of adhesive tape running from the angles of the opposite ribs obliquely around and across the untaped side to the primary bandage at the front.

The unions of the two bandages at the back and at the front can be secured by applying additional short strips of adhesive tape over them. As the skin is a pliable envelope covering the body, this bandage around the opposite side of the thorax is needed to take up the "play" in the skin and to hold this adhesive corset in place. Such a bandage will make a girdle that will give comfort and, at the same time, will give protection. A player encased in such a bandage will breathe in a restricted way but without pain.

SURGICAL ADHESIVE STRIPS FOR CUTS OVER EYE

Often in athletic contests, the player receives a wound over the eye when his head comes into contact with the head of an opponent. This split of the skin and other tissues may be anywhere from one-half an inch to an inch and a half long. As the bleeding interferes with the

vision of the player, immediately apply a pad of cotton soaked in a solution of adrenalin chloride (1-1000 parts). The action of the adrenalin will constrict the capillaries and will stop the hemorrhage.

Then bathe the wound and the adjacent area with grain alcohol. Wipe the wound carefully with aseptic gauze to insure continued cleanliness and to get the wound dry.

Prepare some thin strips of adhesive tape about one inch long and one-eighth of an inch wide. By slightly warming the adhesive tape, you will be assured of better sticking qualities. The lower attachments of these strips should begin on the skin area underneath the supra-orbital cavity. By lifting the tissue gently, the open edges of the wound can be brought together, and the attachment of the upper edges of the strips of adhesive tape can be made to the skin above the eyebrow. Leave a longitudinal space between the strips of adhesive so that air can be admitted to the wound. This precaution will aid greatly in the healing process and will stimulate the development of healthy granulation.

If such a bandage should be torn off during the game, it can easily be replaced. There is less chance when the strips are applied under unfavorable conditions, for infection, than there is if stitches were taken under similar conditions.

In applying these strips of tape to such a wound, always exercise care that the parts are not too tightly drawn together, because with this type of contusion there is some bruising of tissue, which will cause swelling. When affixing the strips, make allowance for this possibility. After the strips are all in place, iodine can be applied to the exposed area between the strips. Never use the iodine immediately before the application of the strips. If tape is added to an area previously painted with iodine, the area will blister.

Two or three days is generally sufficient time to effect the union of the separated parts. See to it while the wound is in process of healing that no separation of tissue is allowed between the edges of the wound. Such neglect of a cut or laceration will surely produce a scar.

This adhesive strip eye bandage is much superior to the metal wound clips, as such adjuncts are dangerous to use in athletic contests. The strips are also more satisfactory for the short wounds indicated than are stitches taken around the eye, as stitching is not only a painful process but is very hard to do in the short time allotted to a player in a time-out. To get the player back into the game within two minutes is the problem in such cases, and an adhesive strip bandage is as simple as well as an effective way to do this.

BANDAGING STONE BRUISE OF THE HEEL

Plate
112

When a player alights heavily on an unpadded heel, he often receives an injury known as a stone bruise of the heel. A stone bruise is really a severe injury to the plantar nerve in its course through a groove in the calcaneus or os calcis (bone of the heel). The injury to this nerve inflames the adjacent area and makes it difficult for the player to run or even to walk on this injured heel.

By using strips of adhesive tape four and one-half inches long and three inches wide in alternating bands lengthwise and crosswise of the foot, you can get a player with such an injury back into the game much sooner than by many other methods of treatment that are employed.

When completed, this stone bruise bandage should have from five to seven of the alternating strips of tape on the heel. The tape, if applied alternately and firmly, will afford splendid protection for the injured heel. When the player is in action, this adhesive tape cushion will take the brunt of every blow or jar which would otherwise come full upon the heel.

All adjuncts, such as applied moist heat to the heel and the foot, and massage of the foot and leg, are indicated in the treatment of this injury. The bandage as described is used solely to guard against further irritation to an al-



Plate 112, Bandage for Stone Bruise of the Heel.
Plates 113-A, 113-B, Taping the Foot.
Plates 114-A, 114-B, Figure of Eight Ankle Wrap.

ready injured member. The bandage is for protection, which, in this case, is the greater part of the cure.

TAPING THE FOOT

Plates
113-A
113-B

(1) *Blister on Sole of Foot*—When a blister is raised on the plantar area of the foot, use a sterile needle and penetrate the skin. You should penetrate the true skin instead of merely puncturing the blistered area, so as not to admit air to the seat of the blister. Air admitted to the blister will cause pain. After letting the fluid out, cover the inflamed area with a thin piece of cotton about the size of the blister itself. Over the cotton affix a piece of adhesive tape approximately four times the size of the blister. The cotton will keep the adhesive tape from sticking to the blister and from damaging the tender and inflamed area when the tape must be removed; while the tape will keep the blister from breaking open during the time of tenderness and inflammation, and will thus allow nature to build a base under the blister.

(2) *Callus on Heel*—A callus may become so thick on the plantar surface of the foot that it may positively hinder locomotion in either of two ways: first, by pinching the nerve end plates of the skin; second, by allowing a blister to form underneath the callus. In the latter case, the excess exudate is difficult to re-

lease, and before the individual discovers what is wrong, the whole foot may be throbbing much the same as it does in a case of blood poisoning.

If the player will wear a large piece of adhesive tape over a callus, the action of the zinc oxide in the tape will soften the calloused part; and if he will use a safety razor blade to trim the hypertrophied tissue; he will be able to prevent the after effects of the callus—among which is the pinching of the nerve end plates in the skin. Such pinching will cause pain upon pressure of locomotion.

Should a blister form underneath the callus—a condition which might prohibit the player from getting into the game—it would be better to use a more heroic treatment than the one previously indicated. In such case, immediately cut down with a scalpel into the callus and puncture the blister. It is well to cut off the heavy skin directly over the blister. A tender and raw surface will then be exposed. In about ten minutes, after the blister has had ample time to drain, put a pad of gauze saturated with alcohol over the blister; then apply some reliable ointment freely over the involved area. Over the ointment use a piece of gauze and another of cotton with a binder of adhesive tape to hold the ointment in place. As soon as the foreign substance is released from the blister, and an ointment, such as Unguentine or Campho-phénique

salve, is applied freely, the player will be able to again stand on his foot, and without much pain. After such treatment is applied, a player can soon get back into the game. The greasy base of an ointment dressing prevents another blister forming while the athlete is in action. It also removes the inflammation from the part.

(3) *Bunion or Sprain of the Great Toe Bandage*—A bunion is produced by lateral pressure from the inside of the shoe against the great toe. The joint of the great toe is then exposed, and the friction of the shoe against the joint sets up synovitis. Man in walking pushes off on the great toe. If there is any impairment of strength or support of this member, he will shift his weight to the heel. Due to the fact, that the great toe is so vital to a correct walking posture, it should be kept in proper position.

Directions for Strapping the Great Toe: Draw a strip of adhesive tape one inch wide and fifteen inches long around the great toe, along the arch of the foot and anchor it around the heel. Now add a strip of tape one inch or one and one-half inches wide, transversely, to the arch of the foot to hold the bandage close to the arch when it passes from the base of the great toe to the heel. This strip of tape will draw the bandage a little tighter. Reinforce the first one-inch strip that was applied with an additional one-inch piece of tape starting at the base of the

great toe and running to the arch. By using this type of bandage, you can so brace the great toe that it will not drop over against the second toe. If the bunion is very painful and the case is of long standing, do not attempt to adjust the toe to proper position in the first bandaging. This must be accomplished gradually. But if the great toe is constantly kept in position, the other toes will soon find their correct places and will fill in the space which has been produced by the great toe having been out of line for so long.

This bandage should be worn for a period of five days without changing. It may be necessary to wear this type of bandage for several months before the bunion can be entirely removed.

If the joint itself is painful, cover it with adhesive tape to further relieve any pressure that might come upon it. Should you find it necessary to loosen the bandage somewhat after it has been applied, pull the attachment loose from the end of the great toe and thus allow the bandage to give somewhat. Then replace the attachment so that the movement of the great toe is less restricted. This makes an adjustable bandage.

(4) *Broken Arch or Flat Foot Arch Support*—By referring to Plate 113-B as well as to Plate 113-A, you will readily see how this bandage was put on. Plate 113-A shows the bandag-

ing of the inside arch, and Plate 113-B shows the bandaging of the external transverse arch. Any player who has trouble with his arches will do well to use this kind of bandaging. These two braces combined not only give added strength to the arch but also hold the bones of the foot and ankle in place.

When applying an arch support to the inside arch of the foot, first invert the foot and tightly wrap three one-and-one-half-inch strips of adhesive tape transversely around the arch. These strips should encase the schaphoid and the internal cuneiform bones (bones of the arch). When the inside arch is well supported by the strips of tape, continue the bandage on around the heel and to the point where the tape was started. It will be surprising to see how much support these strips around the arch will afford.

When applying this support to the external transverse arch of the foot, first bring a strip of tape one-inch wide around the heel and over the top of the foot. Then start an additional one-inch strip of tape circularly around the transverse arch of the foot and continue it underneath the foot to be attached to the sole.

Soft Corns Between Toe—Perspiration of the feet, the proximity of the toes to each other, and more or less pressure from shoes, are the predisposing causes of soft corns. The fact

that the players do not dry well between the toes after bathing is the principal exciting cause.

A direct treatment that is very beneficial to the broken-down tissue of soft corns follows: Apply a thin tissuelike layer of cotton saturated in alcohol and menthol crystals to the soft corn. The alcohol will toughen the skin; while the menthol will act on the sensory nerves and will give a healing and cooling effect to the painful tissue. Two drams of menthol crystals to one-half pint of grain alcohol is the right proportion to use.

The player should carry a small vial of this liquid in his pocket during the season and apply it to the corn every two hours. At night he should spread a thin layer of cotton mulched in boric acid powder between the affected toes. The boric acid powder will dry the soft corn at night after the alcohol and the menthol have had their effects during the day. With this combination of alcohol, menthol, and boric acid at work, it will be a matter of only two or three days until the corn will be ready for dull dissection. After the corn is dull dissected, see that the player continues the use of the alcohol, and soon all traces of this trouble will disappear.

Hard Corns on Toe—An athlete is constantly charging forward, pushing his toes into the athletic shoes. Friction on the upper part of

the toes is apt to produce hard corns. By having the men trim such corns with a sterile safety razor blade and then plaster them with pieces of adhesive tape, you will soon eliminate the trouble. The friction of the shoe will come upon the tape and not upon the toe. This tape can be worn for five or six days at a time. If such adhesive patches are used consistently on hard corns for a period of two or three months, the corns will not reappear.

FIGURE OF EIGHT ANKLE WRAP

Plates
114-A
114-B

By using bandages of heavy unbleached muslin two and one-half inches wide and seven feet long, you can make ankle wraps that will support the arches and the other bones of the feet. Few players ever sprain their ankles when wearing a bandage of this sort. Players should be taught how to apply these ankle wraps without aid.

Directions for Applying: Invert the foot and cover the instep with two circular turns of the bandage. After the instep is well covered, carry the bandage directly around the point of the heel and return to the instep by bringing the bandage over the top of the foot. Continue this procedure until the bandage is exhausted. Do not leave any loose ends. On the last lap of the figure of eight bandage, slip the loose end under the last layer of the ankle wrap and thus secure it in place.

To further strengthen the ankle and to hold

the bandage in place, strips of adhesive tape one and one-half inches wide and twelve inches long can be drawn around the ankle at the point of greatest mobility. A player should not walk on his foot after the bandage has been applied until the sock and shoe have been placed over it. Any bandage will work loose unless the shoe is laced over it to assist in holding it in place.

BASKET WEAVE ANKLE BANDAGE

First Taping

This bandage is intended for an ankle that has received a very severe sprain. For the application, prepare three strips of three-inch adhesive tape twenty-two inches long and three strips of three-inch tape eighteen inches long. These strips should be torn into smaller strips one inch in width. This will make a total of nine strips that are twenty-two inches long and an equal number eighteen inches long.

Invert the foot while the bandage is being applied. Bring the strips of one-inch tape that are eighteen inches long lengthwise around the foot and the heel. (Study Plate 115-A for this adjustment.) Alternating with these strips which are applied to the foot and heel are the strips twenty-two inches long that go under the heel and halfway up the outer, inner, and back sides of the leg. This bandage practically meets itself behind at the tendon Achilles. The reason

Plate
115-A

for running the tape so far up the leg is to take some of the strain off the insertion of the gastrocnemius muscle (large muscle in the back of the leg) where it inserts into the tendon Achilles.

When applying the strips, overlap each one about two-thirds of its width by the next strip that will run in the same direction. The ends of the strips around the foot must not overlap nor meet on top of the foot. Leave a space about one and a half inches in width along the entire anterior view of the bandage for the return circulation of the blood. Take extreme pains in putting every strip of adhesive tape on smoothly—without any semblance of a fold—for any irregularity will cause either a blister or a break in the skin.

This bandage should not be worn over five days, because the cuticle, when tightly encased in adhesive tape, is irritated by the hair follicles. When the bandage is removed if the ankle is still weak, another bandage can be put on after a day's rest, provided the skin has been toughened sufficiently by the frequent applications of alcohol.

When using a basket weave bandage, always apply it to the foot and ankle the day preceding an important contest, as it will take some time for the player to become accustomed to a tight bandage of this type.



Plates 115-A, 115-B, 115-C, 115-D, Basket Weave Ankle Bandage.

Plate 116, Double Spiral Three-Quarter Figure of Eight Knee Bandage.

Plates 117-A, 117-B, Acetate Dope Cast for Knee.

Method of Fixation

Plate
115-B

Medial View—When the basket weave bandage has been completed, fix or set the edges by collateral taping. At the top of the bandage, bind a three-inch strip of adhesive tape circularly around the leg. Continue these three-inch circular collateral strips around the foot and the heel until the basket weave is in an additional encasement of three-inch tape. This additional encasement of the basket weave bandage is plainly shown in Plates 115-B and 115-C.

To keep the tape from rolling up along the front or sides of the foot, affix strips of one-and-one-half-inch tape along the edges of the front of the bandage and down its entire length along the shin and the top of the foot.

When the bandage is first set, there will be intense pulling at the back of the leg where the top of the basket weave is attached. The bandaged leg and foot will be so clumsy that the player will feel he can never run. However, insist that he put on boots or high shoes and walk for an hour or so until the bandage gets set. The high shoes together with the walking will set the bandage; and after the bandage is once set, no further difficulty will be encountered. Not only will this adhesive tape cast, when set, prevent excessive swelling and permit walking without pain, but the attachment of

the tape to the skin will form a natural massage when the muscles are in action, and thereby will aid in recovery.

In addition to showing the collateral taping affixed over the basket weave ankle bandage, Plate 115-B shows a front view of the foot. Note that an untaped space has been left along the entire front of the leg and foot to provide for the return circulation of the blood.

Finished

Lateral View—If the sprain should be most severe at the external malleolus (ankle joint), use additional adhesive bands (shown in Plate 115-C) running from the outside of the foot around and back of the heel. These additional strips will brace the weakened joint. A high shoe worn over the bandage will aid materially in locomotion.

Plate
115-C

At the end of five days if the sprain is severe enough to require a second bandage, paint the skin of the leg and foot with grain alcohol several times before applying a second bandage. The alcohol will toughen the skin and remove the inconvenience caused by the excessive soreness and tenderness of the taped area. Such a condition of the skin will in all probability exist after the removal of the first bandage, as all air has been excluded from the area encased.

After Its Removal**Plate
115-D**

Plate 115-D shows the basket weave ankle bandage supporting its own weight. This plate gives one a clear idea of the strength of the make-up of this bandage.

The splendid qualities of this bandage are to be found in no other. It possesses all the advantages of the plaster of Paris cast and yet allows passive movement of the joint. It combines thinness with strength, and can be worn under a shoe without inconvenience. The entire bandage when once applied is no thicker than a heavy woolen sock. With such a support for the ankle, a player, who has been eliminated from probable participation in a contest on account of his injury, may get back into the game.

**DOUBLE SPIRAL THREE-QUARTER FIGURE OF EIGHT
KNEE BANDAGE****Plate
116**

When the internal or external lateral ligaments of the knee have been stretched and injured, a double spiral three-quarter figure of eight knee bandage will give much support to the knee. The knee is one of the most difficult parts of the body to support by a brace that will give, at the same time, protection, support, and latitude of movement.

Directions: Prepare eight one-and-one-half-inch strips of adhesive tape twenty-two inches long. Begin the first pieces eight inches above

the knee, one on the inner and the other on the outer side of the back of the thigh. Run the strips diagonally across each other, just above the kneecap and end them on opposite sides, on the back of the leg. Fasten the loose ends of the tape together with short pieces of adhesive tape. This bandage makes a most substantial and effective support. A steel brace, which is stock athletic material, can be worn over this adhesive bandage for further protection if desired.

ACETATE DOPE CAST FOR KNEE

Lateral or Outside View—In addition to the steel brace and the adhesive tape bandage, a most effective knee cast can be made from Acetate Dope 104. The acetate dope has been previously described in connection with Plates 105-A and 105-B. The splendid feature of this acetate bandage is that it can be made form-fitting and adjustable by the addition of lacing eyelets and a tongue. In Plate 117-A such a lacing has been placed at the side of the thigh, knee, and leg. Plate 117-B shows the cast without the lacing.

Plates
117-A
117-B

When applying this bandage, the cotton and gauze were placed upon the thigh and leg and then the first coat of acetate dope was applied with a two-inch paint or varnish brush, and after the dope had hardened sufficiently, the cast was cut as it was in the casts for the forearm

and wrist. The process for making all such casts is identical with that taken up in Plates 105-A and 105-B. If more coats of the dope should be needed, they can be applied in the same way, some thirty minutes apart.

When the cast is removed from the knee, the eyelet bands and tongue can be sewn in. Keep the cast laced over a small feather pillow until you are ready to replace it on the injured knee, in order to hold it in shape. This bandage can be made as hard as is desired by applying additional coats of Acetate Dope 104.

The possibilities of making bandages from cotton, gauze, adhesive tape, and Acetate Dope 104 are unbounded. The bandages may be supports for the shoulders, ribs, nose, chin, or any other part of the body.

REMOVING ADHESIVE TAPE EXCESS

The excess of adhesive tape can be removed by applying gasoline, benzine, alcohol, or ether to the parts to which the under surface of the tape has adhered. If these agents should parch or irritate the skin in the process of the removal of the tape, apply some comforting ointment to the tender areas.

CAUTIONS IN TAPING

Never paint a skin area with iodine and then cover the same immediately with adhesive tape. Iodine blisters when the skin is immediately covered with a bandage, especially when covered with adhesive tape.

Also, never put adhesive tape over a raw wound. Such procedure would bring grave danger from infection. Adhesive tape is not an antiseptic.

LUXATIONS OR DISLOCATIONS

A dislocation is "a persistent separation from each other, partially or completely, of two articular surfaces. A self-reduced dislocation is called a sprain. There are three forms of dislocations: (1) traumatic; (2) spontaneous or pathological; (3) congenital." In this athletic connection, we shall discuss only the traumatic, for practically all athletic dislocations are traumatic.

If a dislocation that is easy to reduce should occur, many times the trainer can handle it. However, if he feels at all uncertain about the injury, it is best to call a physician. A dislocation of the shoulder can easily be determined by the following simple method: If the injured player can place his hand located on the side of the injured shoulder on his opposite shoulder, he probably does not have a dislocation.

Shoulder dislocations of the simpler type (subglenoid) can often be reduced by the following method: Place the player prone upon his back. Remove your shoe and place your heel in the axilla (arm pit) of the injured player. Exert a strong traction on the athlete's dislocated shoulder by clasping his wrist and pulling with both hands while you simultaneously extend your foot forcibly in and under the player's shoulder.

If the resistance of the muscles around the joint is not too great, this movement should replace the shoulder with a snap. However, many times such contractions of the muscles, due to the attendant pain of the injury, cannot be overcome until an anæsthetic is administered and complete relaxation is thus obtained.

After a dislocation has been reduced, it should be bandaged so that it will get the benefit of a maximum support.

Passive movement is also indicated in the restoration of a member, thus weakened, to normal strength and activity.

CONTUSIONS

General—These injuries generally result from violence. There is usually pain, tenderness, swelling, and discoloration of the skin. Numbness may also be produced if the contusion involves a large nerve fibre.

Be very careful in examining the injured area of a contusion. Always anticipate a fracture. Where there is the slightest doubt as to the nature of the contusion, employ the X-rays.

In simple contusions when there is no fracture, cold packs are generally indicated for the first half hour. Follow the application of the cold packs with heat, either moist or dry. Due to the inconvenience of applying moist heat, usually the dry heat is more expedient. An electric pad is an excellent and an easy way to treat such emergencies. These pads are especially convenient at night, as the heat is evenly distributed and the pad can be wrapped around the affected joint or the extremity. Pin the heating pad around an extremity so as to get the heat thoroughly distributed over the area but be sure not to let the pin get into contact with the coils as a short circuit will result. The best heating pads are wired for high, medium, and low heat, which makes it possible to regulate them and to get the exact degrees of heat desired.

Internal Hemorrhage of Lower Leg—The rupture of a small blood vessel in the thigh or leg will often discolor a large area of tissue. Generally, the athlete is worried and wonders what is the cause of the discoloration. If there is no pain, there is no cause for alarm. The discoloration signifies that the ruptured blood

vessel has released its contents between the sheaths of the muscles and the skin. As the blood, thus released, gravitates downward during the process of disintegration, discoloration is sure to occur. Only through absorption can this be carried away. There is nothing harmful or serious about a condition such as this; and it is well to assure the athlete in advance that, when the affected area turns green and, later, greenish yellow, the processes of repair are going on.

However, if pain attends such a discoloration, report it at once to a physician, as something more serious might develop.

Hemorrhage of the Nose—Whether the hemorrhage is from the nose or from some other part of the body, use cotton soaked in adrenalin chloride (1/1000 parts). If the hemorrhage is of the nose and is at all severe, stuff a small piece of cotton in the nostril, and by throwing the head back, let the excess of adrenalin chloride flow into the nasal pharynx. This will constrict the capillaries and cause a coagulation of the blood so that the hemorrhage will soon cease. The tampon in the nostril can be removed in time to get the player back into the game within the required two minutes.

A pad of cotton forced securely under the upper lip will also stop nosebleed, but it will

take a longer time to accomplish the result than is required by using the adrenalin.

Epistaxis (nosebleed) is quite common with many athletes. A catarrhal condition of the nose and throat generally predisposes to this annoyance. Often by massage of the muscles of the neck, at the base of the occiput (base of cranium), the blood supply will be increased, and consequently the vitality to the nasal region will be strengthened. These small capillaries with their vitality strengthened, will not then be so easily broken down by exertion.

Varicose Veins—An insufficiency in the muscular walls of the veins causes excessive dilatation. This dilatation often so weakens the walls of the veins that a hemorrhage is easily produced by a heavy force directed against the area of lowered vitality. Such ruptures of the vascular walls easily shades into varicose ulcers.

First aid treatment in such an emergency: Apply a pad soaked in adrenalin chloride; and after the hemorrhage is reduced, use cold ice packs. The team physician should have such cases under careful observation.

Black Eye (Ecchymoses)—This injury is seldom very serious. Rapid swelling will take places unless cold packs are immediately applied. Use pressure against the injury while applying the cold packs. After half an hour or so, hot

applications should be resorted to. Apply hot packs continuously until the swelling is reduced. If the enlargement of the swelling should interfere with the player's ability to see, there are times when a leech can profitably be employed to draw the blood from the strutted area. Raw beefsteak applied to the blackened eye is also another old method that various trainers have employed with success.

But more expedient than either of these agencies to remove the discoloration and to lessen the swelling is a pad of cotton soaked with English marigold (*Calendula*) and placed over the bruised tissues of the blackened eye.

BURNS AND "STRAWBERRIES"

These injuries to athletes come in all sports. While they are common in football and basketball, they occur more often in baseball and track. In reality, they are burns incurred through friction, by falling while in rapid motion, either upon the floor, the ground, or the cinders. Their red seared appearance gives them the nickname of "strawberries."

If there are any particles of foreign matter, such as small cinders or dirt lodged in the wound, wash the part with a five per cent lysol solution, combined with castile soap. Then wash thoroughly with grain alcohol and apply iodine. Iodine is contra-indicated on burns of

other types, as it only adds insult to injury. But in these athletic "strawberries" the danger of infection is too great to take a chance with milder antiseptics.

Follow your antiseptics with applications of Unguentine or other ointment to allay the pain. Continue to use an ointment on such burns, especially if the athlete is a competitor and expects to participate in the next few days. Ointment makes the injured part more pliable, therefore, more readily bent. An ability to bend an injured member is very essential to a participating athlete.

After two or three days apply, over the raw tissue of the burn, a gauze pack saturated with pure grain alcohol. The alcohol will have a tendency to harden the raw tissue and to build a base for new tissue. Keep the area moist with alcohol for a time (a day or two) and then revert to the ointment dressing. The ointment dressing is a slower healing process than is a dry dusting powder dressing, but so long as you have the wound sterile, pliable, and soothed, the athlete can participate in games without injury or inconvenience while his wound is healing slowly but surely.

INFECTIONS AND LACERATIONS

All infections and lacerations should be treated immediately with an antiseptic Iodine

is probably the most widely used and undoubtedly one of the most reliable.

Wet antiseptic dressings are best for ulcers and all infected areas such as lacerations, burns, etc. If the wound is kept continuously saturated with the wet antiseptic solution, there will be small chance for the infection to become deep seated; and there will be but little chance for any infection in the wound to exist and thrive.

No trainer should be without these two formulas for wet dressings: namely, Ochsner's Solution and Wright's Solution.

Formula for Ochsner's Solution—

Boric acid.....	7 oz.
Glycerine.	3 oz.
Alcohol (grain)..	27 oz.
Phenol.	2 oz.
Aqua (distilled)..	89 oz.

Mix the boric acid and glycerine in a paste before adding the phenol, alcohol, and distilled water. The preceding ingredients should make up one gallon of Ochsner's solution.

Formula for Wright's Solution—

Sodium citrate.	4 gr.
Sodium chloride (table salt)...	40 gr.
Aqua (distilled)....	2 oz.

The best results are obtained from wet dressings by saturating the gauze, which is placed on the wound, every thirty or forty

minutes with the solution. The boric acid and salt deposits around the wound will aid in the granulation which is so essential to the healing processes. Do not remove the gauze from the wound during treatment but continue to apply the liquid so that the wound will be kept moist and the gauze kept free from adherence to the wound.

Boric Acid Solution—Boric acid (saturated solution) is a splendid liquid with which to irrigate an infection before the application of the wet dressing. When irrigating a wound, use the boric acid solution hot. Pour it over the infected area and catch it in a pan underneath. The same solution can then be reheated and reapplied again in the irrigating process.

SPECIFIC MANIPULATIONS

Method of Raising Depressed Ribs

Instructions—In these directions let us assume throughout that the trainer-coach is the operator. Face the player who is lying on his left side. The player should flex his thighs and draw his knees up toward his abdomen. Such a position will anchor his body and keep him from being pulled over on his abdomen when traction is exerted upon the arm and upon the angle of the ribs.

The player's right arm should be thrown limply over your right forearm and arm.

Now place your left hand over the angle of

the player's right ribs and sink the cushions of the fingers deeply and firmly into the heavy tissues of the back, as shown in Plate 118.

Then with a slow stretching process, draw the player's right arm forward and, at the same time, cause a downward and forward pull at the angle of the ribs. By holding this advanced position for eight or ten seconds, you can relieve a so-called stitch in the side or a pressure from a depressed rib, possibly acquired in a scrimmage collision.

In like manner, you can move your left hand along the spine to the angle of each rib and each time repeat this stretching process, until every rib has been lifted.

A more decided stretching and lifting of the depressed parts can be obtained by having some one stand at the back of the injured player and encircle the crest of the player's hips with his hands and arms. This assistance will fix the position of the hips and facilitate a greater separation of the ribs, when the player's arm and shoulder are brought forward.

If still greater traction is needed in this manipulation, you can, by moving one step farther to the right and leaning in the same direction, throw your entire body weight away from the player and thus exert an extreme tension in this stretching process.

To briefly explain scientifically, what you will have accomplished by this type of manipulation:



Plate 118, Method of Raising Depressed Ribs.

Plate 119, Method of Manipulating Tackle Shoulder.

Plate 120, Manipulation for Correction of Charley Horse.

By the manipulating process that you have employed, you have stretched the latissimus dorsi muscle which has its origin in the spines of the lower thoracic, lumbar, and sacral vertebræ, the crest of ilium, and three or four lower ribs, and has its insertion in the bicipital groove of the humerus (upper arm). You have also manipulated the serratus posticus superior muscle, which has its origin from the spines of the seventh cervical and the two upper thoracics and its insertion to the second, third, and fourth ribs; and the serratus magnus muscle which has its origin in the eight upper ribs and its insertion into the inner margin of the posterior border of the scapula (shoulder blade). By stretching these three principal muscles, which have their origin along the spines of the vertebræ and in proximity to the union of the ribs and the spine, and their insertion into the upper arm and the shoulder blade, you can readily see how the elevation of the ribs will be effected.

Method of Manipulating a Tackle Shoulder or a Lamé Baseball Shoulder

Plate
119

Do not manipulate the tender area at first. Work the uninvolved area until the adjacent tissues have been thoroughly loosened and the blood supply thereby increased and the pain lessened. An electric heating pad is an excellent adjunct to the treatment of this type of

injury, in which there is extreme tenderness of the part.

In preparation for this manipulation, the injured player is in a position identical with that shown in Plate 118. His right forearm, with its accompanying hand dropping over as an anchor, is thrown limply across the trainer's right forearm. In Plate 119 the trainer has changed his position somewhat from that maintained in Plate 118. His right hand in this movement bridges across to the player's neck and shoulder muscles.

Instructions: First, by shifting your left hand out to the point of articulation of the clavicle and the scapula, palpate and determine the extent of the injury. Then, with your right hand in the position previously indicated and your left hand grasping the injured player's elbow, push his arm down and back so as to relax the heavy shoulder muscles. Keep your abdomen pressed firmly against the player's elbow, and thereby get an easier manipulation of the heavy shoulder muscles.

Use your right hand for the delicate manipulations of the brachial plexus, which is the main nerve supply to the arm and shoulder and which arises from branches of the fourth, fifth, sixth, seventh, eighth cervical, and the first thoracic nerves. In this manipulation of the plexus, let your finger cushions carefully feel their way

into the tissues. Do not, when exerting the finger pressure, punch or dig them. By a thorough and gentle, though deep manipulation of these tissues that involve the nerve and blood supply to the injured parts, you can aid in restoring normal function to a crippled shoulder.

If the lameness of the shoulder should be in the attachment of the muscles of the arm and the scapula, instead of in the region of the brachial plexus, use the left hand in the manipulation of the joint. In this case, by bringing the player's forearm around to his back and letting it rest there, you will have both hands free for the manipulation of the joint.

Manipulation of the Leg to Correct a Charley Horse in Back, Leg or Thigh

Plate
120

Charley horse—"Stiffness of an arm or leg, as of a baseball player."—Webster.

The Charley horse is the coaches' bugaboo. It is interesting to recall the origin of the expression "Charley horse." Years ago when "Muggsy" McGraw was playing with the Baltimore Orioles, a number of the gambling baseball fraternity had been tipped off by a race horse tout that a horse named Charley, who was a long shot "*sure*" thing to win, was billed to come under the wire a winner. Charley got off in the lead, held it through the first, second,

and third turns, but when Charley came around the last turn and into the final stretch, he pulled up lame and came in a rank outsider. The boys of the ball club, who had placed all their earnings on Charley to win, were "broke."

The next day, when the baseball game was in progress, a quick-witted player, the like of "Germany Schaefer," was on the coaching line. A young player hit a sharp infield grounder. In trying to beat the hit out to first base, the young chap "pulled" a tendon and was thrown out by the infielder. The clever coacher on the line—recalling his sad experience of the day before when he lost his money on Charley—shouted to the unfortunate player as he limped from the base, "Ah-haw, just like our old Charley horse!" From that day, the term has been generally accepted for a certain type of injury. It is a misnomer. Any contracture (continued contraction) which is abnormal and causes a knotting of the muscles is called a Charley horse, and it may occur in any part of the body.

In correcting a Charley horse of the thigh or leg, you should place the player on a table prone upon his back, with his body thoroughly relaxed. As shown in Plate 120, the trainer should stand on the same side as is the injured leg of the player. Once in this position, encircle the great trochanter of the femur with the

cupped fingers of your left hand. The player's right knee should be placed in the left axilla (arm pit). Your right hand with palms turned upward should clutch the player's right ankle. At this point, carefully follow the directions for the final manipulation, for herein lies its success.

Maintain a steady pressure with the left hand on the trochanter and a riding downward pressure on the knee with your arm pit and shoulder; and contribute to the movement an elevated lifting force with your right hand and forearm. Now carry the player's leg and foot in the extended median plane, up and outward, toward the end of the table where his other foot is extended.

This position must be maintained if such types of injury are to be corrected. The movement properly executed so sets the ligaments of the pelvis that a correction is effected by removing the predisposing cause of the Charley horse. This predisposing cause is usually a slight subluxation between the pelvic bone and the back or sacrum. The exciting cause was the blow or strain to the injured muscle or nerve. If the nerve supply can be aided in its functioning by an added blood supply, the vitality of the injured part will soon be restored; for the structure of the part largely determines the function.

Manipulation of the Hip Bone (Os Innominatum)**To Correct a Wrenched Back**

When the injury to the front of the thigh (quadriceps extensor muscles) is so severe as to preclude the flexing of the thigh upon the abdomen, another manipulation in which the trainer should use partial rotation of the pelvis and thus effect a loosening of the deep muscles of the back around the os-innominatum, is obtained in the following way.

The Method—The player lying upon his left side with his thighs flexed, faces you. The player's injured leg and thigh are thrown across your right shoulder. At this juncture, bring your left hand and forearm under the player's injured thigh with the cushion of your right hand placed upon the crest of the player's ilium (front of hip bone). At the same time, place your hand upon the player's back at the articulation of the sacro-iliac synchondrosis (juncture of innominate and sacrum). In this adjustment, an assistant should hold the player's left foot while you use a firm pressure with both hands upon the player's pelvis.

While performing the manipulation, keep the left wrist and forearm in firm apposition with the player's tuberosity of the ischium (lower prominence of the pelvis). With your legs spread apart, sway back and forth, carrying the weight of the player's leg and thigh upon

your shoulder. As you move forward, close your forearms, wrists and hands tighter around the pelvic bone, and use a quick forward turn upon the pelvis at the time of the most complete relaxation of the player. Attempt in this movement to push the pelvis around and forward.

For further manipulation of the deeper muscular tissues, bring the right hand forward and over to the small of the back. Then, by placing the palms in the lumbar muscles, exert a heavy traction with the finger cushions upon the small of the back. Lean away from the player as the manipulation is conducted.

Exerting Deep Pressure Upon the Back to Relieve Pain.

Plate
122

During the Spanish-American War, the natives of the Philippines taught the American soldiers a mechanical way to relieve dysentery. They would throw an army blanket over a log, six or eight inches in diameter, and stretch across the log on their backs with the small of the back in proximity to the log, the head and shoulders touching the earth on one side of the log and the feet and legs, on the other. By maintaining this position for five or ten minutes at a time, they could temporarily relieve their pain and the inconvenience accompanying their condition.

Today the same temporary relief can be effected in such conditions by similarly stretching across the edge of a bath tub or other convenient object. When the object used for this purpose is at too great a height to touch the head and shoulders to the floor while exerting the pressure to the small of the back, stretch the arms above the head and retain this position for several minutes at a time—as long as is compatible with comfort.

Or, as shown in Plate 122, a more specific relief can be obtained by exerting deep pressure with the cushions of the thumbs and index fingers upon whatever vertebral area is involved. The area to be treated depends wholly upon the location of the affected regions and its resultant nerve supply.

Such pressure stimuli are very effective in cases of diarrhea as well as in dysentery, in abdominal cramps, nausea, staleness and constipation, and also in the relief of cases in which a player has received injury to the generative organs.

The method of applying this deep inhibitive pressure to the vertebrae is very simple indeed. The only prerequisite is a workable knowledge of the fundamental laws of anatomy. The position and location of the trainer's hands in Plate 122, designate the area that should be



Plate 121, Manipulation for Correction of Wrenched Back.
Plate 122, Method of Exerting Pressure to Relieve Pain.

treated when injury to the generative organs occurs.

In all mechanical pressure upon the spine for the relief of the various ailments indicated, the pressure should be administered as an alternating pressure and release movement. The continuation of the deep heavy pressure should vary in time lengths, from twelve to fourteen seconds; and each release should vary in length, from three to five seconds. In cases in which the stomach and intestines are involved, each pressure should be continued or maintained from thirty to forty seconds, and each release or rest, about ten seconds. In any case, all such pressure and release movements should be repeated until relief is obtained.

All pressure stimuli are transmitted from the spinal sensory nerves through the white rami communicantes (connections between spinal and sympathetic nerve systems) to the sympathetic system which conveys the stimuli through its various plexuses to the nerves of the parts involved.

There are four definite spinal regions which should be specifically treated for certain indicated ailments or injuries. They are as follows: (1) The cervical region, which comprises the area from the base of the skull to the lower part of the neck at its juncture with the

trunk (first seven vertebrae). This area contributes the nerve supply to the neck, shoulders, arms, forearms, wrists, and hands. Manipulations correctly exerted in this region will minimize ailments of these parts.

(2) The dorsal or thoracic area, which comprises the area from the lower point of the cervical region to the beginning of the small of the back (twelve vertebrae). This area contributes the nerve supply to the heart, lungs, liver, stomach, and intestines. If the functioning of these parts has been perverted, manipulation in this region will aid in restoring their normal activity.

(3) The lumbar region, which begins at the end of the thoracic area and extends through the small of the back to the fixed posterior wall of the pelvis. This area contributes the nerve supply to the anterior surfaces of the thighs, legs, ankles, and feet, as well as to parts of the generative apparatus and to the colon. Deep inhibitive pressure in this region, along with other manipulation, will relax contractures and cramps.

(4) The sacral region, which comprises the flat area between the two innominates and extends to the coccyx (last vertebrae of the spine). This area really contains but one vertebra, which before ossification took place was five

separate vertebrae. This region contributes the nerve supply to the posterior parts of the hips, thighs, legs, ankles, and feet as well as to the pelvic and generative organs. Deep pressure manipulations to these parts will reduce pain after injuries to the testicles and other generative organs as well as affections and injuries to the thighs, legs, ankles, and feet. The pudic nerve which arises in this area and supplies the generative organs, is affected by pressure upon the third and fourth sacral nerves.

A pressure upon the first and second vertebrae of the lumbar region will also affect the ilio-inguinal and the genito-femoral nerves, which control the nerve and blood supply to these parts.

In cases of injuries to the testicles and other generative organs, this method of deep pressure relief, repeated as outlined, will quickly ease the pain caused by the blow, and the player will get back into the game in full physical strength in a few minutes.

For the relief of nausea, acute indigestion and its attendant uneasiness between attacks, exert a deep thumb and finger pressure upon the seventh and eighth thoracic vertebrae. You can easily locate this vertebral area by running your fingers across the back in a straight line, from the lower angle of one shoulder blade to the

other. In this movement, your finger will cross the spine near the seventh or eighth thoracic vertebrae.

By exerting deep heavy inhibitory pressure with the palms and heels of the hands upon the nerves of the lumbar and the sacral regions, dysentery, diarrhea, and cramps in general can be relieved.

Sometimes just before the game, due to nervousness or other causes, a player will suffer a severe acute attack of diarrhea. Deep pressure exerted over the area of the lumbar region (identically located in Plate 122) will usually give immediate relief.

Too, vague as it may sound, the stomach and small intestine can be aided, indirectly, in regaining their normal function by mechanically kneading the common carotid artery sheaths on both sides of the front of the neck. The vagus, or the tenth cranial nerve, which is one of the principal nerve supplies to the stomach and small intestine, lies in this same sheath. For this reason, an inhibitory pressure upon this sheath will affect the stomach and the small intestine.

This vagus nerve, called the tramp nerve by anatomists because it is such a body-wanderer, also supplies the larynx, pharynx, heart, lungs, and liver. Therefore, stimulations or inhibitions to it are far-reaching in their effects.

Massage for the Relief of Constipation and of Staleness

Athletes can do much for each other by trading manipulations after scrimmages. One player can massage or knead the entire set of back and spinal muscles for another player who will lie relaxed and prone upon his abdomen. The many tender areas and contractures in the deep heavy layers of the muscles of the back will respond readily to such daily treatment.

Teach your players the art of this work, and in a short time the men will pair off without any solicitation on your part and reciprocate manipulations and massages. There is too much rubbing and slapping of the skin rather than firm, heavy, kneadings of the deeper tissues, combined with full rotations of the hip and shoulder joints. A little time spent by the players in this routine each day will virtually destroy every semblance of the menace of constipation among the players.

By such a routine relaxation each day after the grind of practice, staleness among the men can be thwarted and usually averted. A gentle springing of the spine and a deep massage of the heavy muscles of the back will send the athlete home each evening in tip-top physical and mental condition.

“Pulled” Tendon

This term is generally a misnomer. The so-called “pulled” tendon is usually an affection of the posterior tibial or sciatic nerve.

This accident most often happens to a track man. The cool damp earth has much to do with the tightening of the muscles of the legs and thighs, for track men wear thin-soled shoes. This fact, coupled with the frequent failure of the track men to warm up before starting their events, is the cause of most of these injuries to the nerves.

If an athlete would thoroughly stretch the muscles of his legs, thighs, and back before competing strenuously, he would avoid many such injuries. The following plan consistently executed will keep many an athlete on the track who would otherwise be off with a “pulled” tendon.

Stretching Exercise: Drive a heavy pole into the ground so that it will stand about five feet high. The runner in order to stretch his hamstring muscles should first hold to the top of the pole with his left hand and kick his right leg at full extension high above his head, about eight or ten times; and should then alternate the same movement by holding to the post with his right hand and kicking in the same way with his left leg.

This stretching exercise will not only increase the runner's stride but will, if practiced consistently, reduce the occurrence of "pulled" tendons. Stretching makes the ham string muscles more pliable and thus renders them less susceptible to "pulls."

By manipulating the thighs and hips of the athlete, rotarily, before he enters competition, you will also aid in reducing the number of such injuries, markedly. The relaxation of the psoas, the glutei, and the ham string muscles will go a long ways toward keeping a runner in first-class condition. Should the athlete with the "pulled" tendon be very lame, place an electric heating pad in the small of the back over the affected nerve area. Massage in the small of the back is also helpful, as the nerves to the thighs and legs arise in this area. Complete rest for a few days is the best course to pursue with this injury. Some trainers advise strapping the back of the thigh and leg with adhesive tape, but this will not remove the cause. Taping this injury means a treatment of the symptom only. But with the cause of the trouble removed, the athlete will be back on the track in a few days; and if you will give him proper care, he will be running in tip-top form within three weeks.

Stitch in Muscles of the Abdomen

This painful injury usually results from a twisted or a misplaced rib which affects the ventral divisions of the thoracic or intercostal nerves. These nerves are, for the most part, distributed to the walls of the thorax and abdomen. Often a strain or wrench of the body will cause an extreme tension on the abdominal muscles. These muscles, being slightly inflamed, will readily go into a state of contracture. Such an injury is often mistaken for a torn muscle.

If the pain is caused by an inflammation of a nerve only and not by a torn muscle, by turning a player thus afflicted on his side and flexing his thigh up to his abdomen, you can so elevate the ribs that the player will obtain relief at once. If relief is obtained by such an elevation of the ribs, it is evident that the muscle is not torn. However, there is always danger of a rupture of the sheaths of the abdominal wall, and such an injury should always be treated as serious until you are positively assured that it is not.

If the pain is relieved by raising the rib, the player will generally protest against idleness. By allowing him some leeway in his desire for activity, you will get an idea of the extent of his injury. If the injury is at all severe, the

athlete will not force his movement, and you can begin to expect a torn sheath, which will require the aid of your team physician.

ATHLETIC HEART

Most of our athletic specialists agree that there is no such thing as an athletic heart, but that there is an athletic tobacco heart. Many athletes use tobacco and indulge in other forms of dissipation right up to the time of the training season. They then go into vigorous training, expecting to get into shape in a very short while. The use of tobacco has already increased the muscular walls of the heart, due to the fact that the heart has been forced to pump faster so as to eliminate the poison taken into the system. Added exertion thrown on such a heart during the athletic season causes a further increase in its size.

Even a normal heart will increase in size with continued and progressive exercise. So should a normal heart decrease in size when the player gradually trains-out at the end of the athletic season. When the season ends, the athlete should not stop his daily exercises abruptly. In order to protect his heart in its normal decrease in size, he should train-out in the same way that he trained-in. When the athlete trains out carefully, his heart under

normal conditions will subside to its natural size,—unless he is using tobacco excessively.

But in cases where athletes use tobacco, the hearts frequently remain large, and different physicians diagnose them as athletic hearts when, in reality, they are athletic tobacco hearts. No good can come to an athlete by the use of tobacco. On the other hand, great harm often results. It is poor business to put a double load in times of great stress upon the very organ that keeps life itself pulsating through our veins and arteries. The best pump is none too good for a splendid athletic machine. If any suspected trouble is encountered with the heart, either functionary or organic, the player should be put at once under the scrutiny and observation of a reliable physician.

EMERGENCIES

Acidity of the Stomach

A player under great tension may awaken on the morning of the game to find his stomach out of order. This is due to an excess of hydrochloric acid, which condition is termed hyperacidity. A teaspoonful of BiSoDol taken just before the meal will usually correct a slight derangement of the digestive apparatus.

Another antacid that can be used with good effect in such cases is a tablet composed of the following ingredients:

Calcium carbonate..... $3\frac{1}{2}$ Grs.

Sodium chloride.....1 Gr.

Magnesium carbonate... $2\frac{1}{2}$ Grs.

This is a regular U. S. P. formula and can be obtained at most any drug store.

If unable to procure the above-mentioned antacids, prepare a half-teaspoonful of sodium bicarbonate and a half-teaspoonful of sodium chloride (table salt). These should be well mixed, moistened, and washed down with a drink of water.

Congestion in the Head (Catarrh)

This is often directly caused by the athlete's failure to dry his hair and the nape of his neck thoroughly, after taking a shower bath. The players after work-outs are usually perspiring when they leave the dressing rooms.

By going out into the cold air while the pores are still open, they can easily contract neuralgia of the face and head, and catarrh of the respiratory organs.

The following treatment is splendid for such conditions, especially when the congestion borders on hay fever or asthma: Use one dram of menthol in two ounces of compound tincture of benzoin. Put a teaspoonful of this liquid in a half-gallon of boiling water. Then place a blanket over the head, allowing the blanket to reach down over the vessel. The inhaling of the vapor rising from this mixture will clear up the congestion and relieve the catarrh.

But the best treatment for catarrh is a preventive treatment. Care of the body to ward off the exciting causes of the trouble is the best kind of precaution that can be used, for no treatment that can be administered will be a cure. At best, all remedies for catarrh are only temporary.

Massage of the muscles of the back of the neck near the occiput will aid in the full return of the circulation of the blood from the cranium and, consequently, in guarding against congestion. Likewise, a deep heavy pressure with the thumb over the junction of the nasal and frontal bones will serve to clear up the sinuses and the nasal passages.

Alternate cold and hot packs on the back of

the neck will also increase the vitality of the muscles of the neck and throat. Often a dash of cold water on the face and throat, as a daily habit, followed by a brisk rub with a Turkish towel, will relieve troublesome cases of catarrh of the throat and nose.

Chills

When an athlete has a chill, it is a bad omen. His resistance is generally very low and many times it is symptomatic of an attack of tonsillitis, or some contagious or other infectious disease.

When such an emergency arises, send the athlete home, give him a hot lemonade, and put him to bed. See that his elimination is cared for. In all doubtful cases, see that a clinical thermometer is used to get an indication of the attendant temperature. If the athlete shows a temperature, materially above 98 6/10 degrees Fahrenheit, the team or family physician should be notified, at once. If influenza is at all prevalent, such an attack may be a forerunner of this.

If the physician is delayed, use the following measures until he can arrive. Get a gallon of bran and pour boiling water over it. Then place a woolen blanket over the athlete's head and have him sit with the blanket over the vessel of steaming bran so that he may get the full benefit of the vapors. After one-half hour of such treatment, the athlete should be put to bed.

The inhaling of the vapor as it arises from the mixture of bran and hot water is a splendid treatment for simple chills and congestions.

Tonsilitis, Sore Throats, and Infectious Colds

Dobell's Solution and Carrel-Dakin's Solution are both excellent gargles to use for throat infections and are splendid preventive methods as well.

During periods of time when sore throats are prevalent, a five-gallon bottle of some reliable antiseptic solution should be kept in the training quarters of athletic teams and used as a throat gargle each day, both before and after practice. Often epidemics of sore throat and tonsilitis among members of the team can be warded off in this way.

A special price, which will make either of the above-mentioned solutions reasonably inexpensive, will be made by almost any druggist when the solution is obtained in quantities of five gallons at a time. A player who will use a reliable gargle during times of infections will very likely be immune.

It is, however, necessary to handle the throat wash in an aseptic manner. Paper drinking cups are possibly the safest means. Although the individual drinking bottles that are provided in most places are very satisfactory. If these one-half pint bottles, with their accompanying

wire delivery cases, are used, the throat wash can be carried on the field to the players along with other individual bottles of drinking water.

During some seasons, an entire team is stricken with tonsillitis. Not only are the men incapacitated during the time the disease is on but are weakened for virile participation for the rest of the season, and are also left predisposed to an attack of pneumonia.

Players affected with sore throats of the mildest form should gargle with Dobell's or Carrel-Dakin's Solutions, upon arising in the morning, at noon, and again before going to bed; and thus should strive to prevent an epidemic of infectious throats and their sequelæ among the squad members.

Hoarseness Due to Laryngitis—When the duty of calling signals rests with a certain player, he must be in good voice. Laryngitis cannot be cured instantly. But in such cases as intimated above, heroic measures must be used to relieve the hoarseness for the period of the game, at least.

A lump of sugar saturated with four or five drops of chloroform and eaten slowly will relax the muscles of the throat enough to enable a player who is in such a predicament to speak aloud. However, this measure must not be misconstrued as a curative one. It is only palliative. The effect of the chloroform is good only for an

hour or so and should not be repeated except in cases of absolute necessity.

Grippe or "Flu"—If possible, refer severe cases of grippe to the team physician at once, as there is always the danger of pneumonia ahead. Until a player so afflicted is taken care of by a practicing physician, prescribe for him the following treatment; a hot bath, followed by an alcohol rub; then a toasting of the feet; a gargle with Dobell's Solution; and into bed. Hot drinks are often used in such cases and with good results.

See that attention is given to the elimination. If the bowels are thoroughly cleansed, the vitality of the individual will probably ward off the seriousness of the attack.

"Gym" Itch or Jockey Strap Itch

This disease is prevalent among athletes and is caused by infection due to the use of soiled jockey straps. It first appears on the inner side of the thighs near the scrotum. Slight itching and burning is present in the beginning, but severe cases have been known to cause such annoyance that it would be impossible for the afflicted one to sleep. A complete change of underclothes and of all athletic equipment—especially the jockey strap—is the very first course of treatment to pursue, as the infected area can become reinfected.

Treatment: Use a soft brush or cotton swab and cleanse the affected parts with liquid lysol soap. Then paint the parts involved with a 2.5% solution of phenol (carbolic acid). This solution will anaesthetize as well as antisepticize the parts. Now apply the official formaldehyde solution and let it remain for two or three minutes,—if the athlete can endure the necessary pain. Then again paint the infected parts with the 2.5% solution of phenol. Dry well and apply Unguentine sparingly. This will serve as an ointment as well as a lubricant for the surface of the skin. Now dust boric acid powder over the ointment and see that the player wears a complete change of clean clothing.

Keep the infected player under observation; and at the end of one week if there are any recurrent areas at the margins of the previously infected region, treat them as before. Continue such treatment once each week until the itch is killed.

Two weeks is ordinarily the time required to entirely obliterate this troublesome infection. During convalescence, use an application of ointment and dusting powder daily.

Ingrown Toe Nails

An ingrown toe nail will slow down an athlete perceptibly. If the toe is suppurating, an application of burnt powdered alum used every

night and morning will serve to dry up and to constrict the wound. Use sterile gauze over the alum to prevent any possible chance of infection.

Do not resort to surgery for the removal of the nail until you have given the following remedy a trial. A removal of the nail by minor surgery will in all probability incapacitate the player as a participant for weeks.

Directions for Removing Ingrown Nails: Apply a 20% solution of nitrate of silver every other day to the approximated sides of the nail and skin tissues. Be very careful to leave no excess of the liquid in the nail groove. The tissues thus painted will turn black.

After three or four applications of the nitrate of silver, you can easily dull dissect the painted nail away from the firmer portion. The action of the silver nitrate callouses the skin and disintegrates the nail. By several such treatments, an ingrown nail can be removed without inconvenience to the player's participation in games.

Hemorrhoids (Piles)

Troubles of this nature are so depressing to an athlete that it is well to have some reliable remedy at hand that may be suggested to the athlete when he is in need of such advice.

Unguentine cones or vaseline, applied through the sphincter muscle, will bring temporary relief

from such annoyance. Such ointments will relieve the attendant itching and smarting. The lubrication of the walls will assist the veins of the anus in properly discharging their congested blood and, thereby, will relieve the attendant pain by lessening the hemorrhoidal tumors.

Hiccoughs

Many remedies for hiccoughs have been conjured up throughout the years by our grandmothers of generations past. But the cause of the hiccoughs was probably never carefully weighed by those prescribing the remedies. If the remedy, which was often coupled with more faith than reliability, worked, it was handed down to posterity as a hiccough cure.

Hiccoughs are caused by an irritation to the phrenic nerve which in its turn causes a kicking of the diaphragm. The phrenic nerve supplies the walls of the diaphragm. Usually digestive disturbances are the causes of the irritation to the phrenic nerve and therefore the causes of hiccoughs.

If a deranged stomach is causing the hiccoughs, a teaspoonful of sodium bicarbonate will sometimes relieve the condition. Or about one-fifth teaspoon of sugar moistened by four or five drops of cider vinegar will often inhibit hiccoughs. This latter method relieves the hiccoughing more consistently than does any

other home remedy in use. Try this remedy first.

Sometimes a drink of water, taken without breathing while drinking, will relieve the hic-cough spasm. At other times, a sudden start-ling of the patient will serve the purpose of re-lief.

Or, steady inhibitive pressure upon the phrenic nerve which is made up from the third, fourth, and fifth cervical nerves will often quiet hic-coughs.

Still other remedies employed and often with immediate success are as follows:

(1) Depress the root of the tongue with the handle of a tablespoon for two minutes.

(2) Catch the tongue with a clean handker-chief and exert traction for one or two minutes. This is a very successful remedy for the abate-ment of hiccoughing. If one remedy does not work, continue in your hiccough repertoire until you find the remedy that suits the idiosyncrasies of the patient.

Toothache

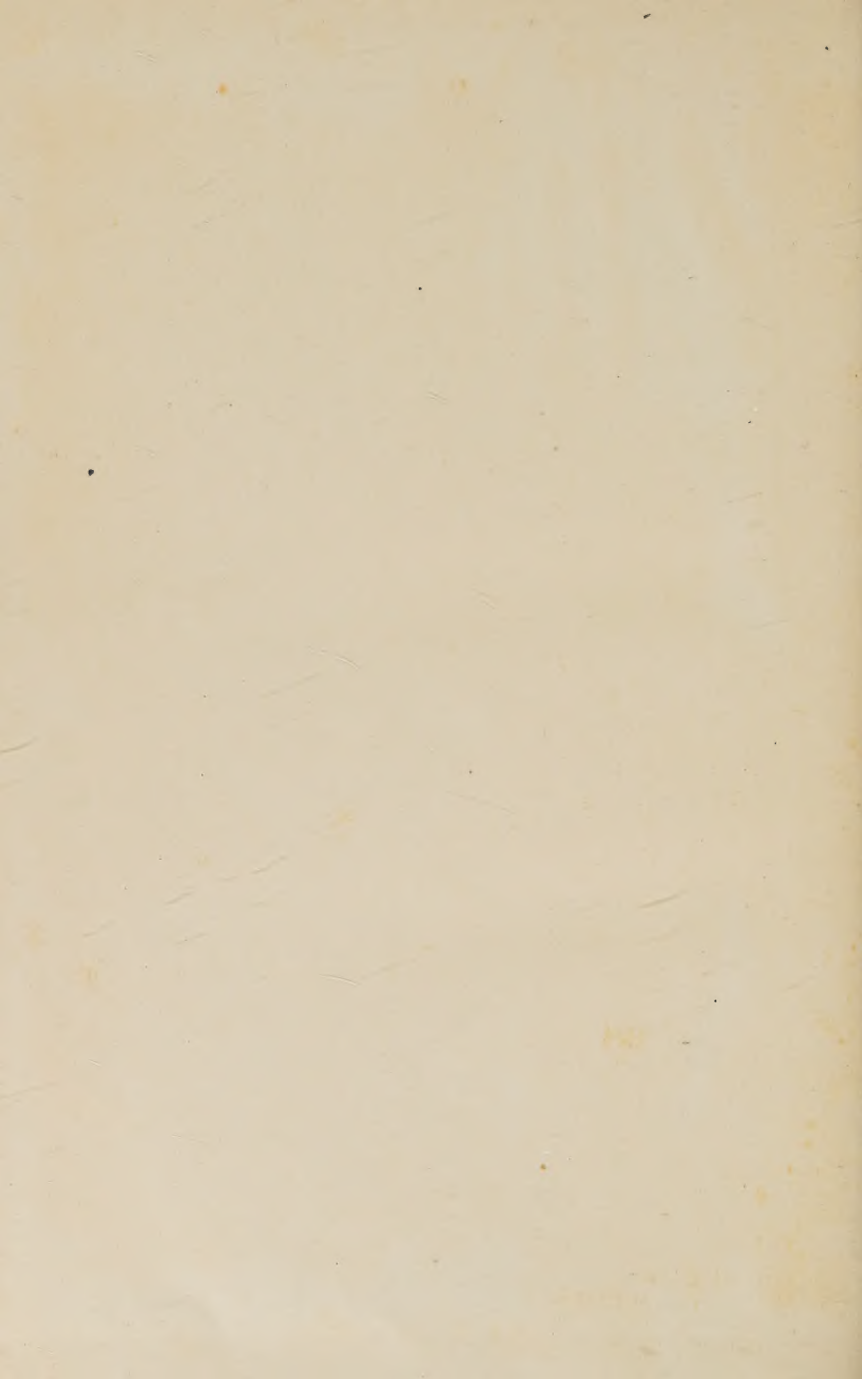
A wisdom tooth or sometimes a crowned tooth will give an athlete so much trouble before a dentist can be found to treat it that it is well to know how to relieve such pain. Such a conven-ient knowledge may not only relieve suffering but may enable the player to continue in a game.

Remedy: Place a five-grain tablet of acetanilid beside the aching tooth and let it dissolve. This will generally cause an abatement of pain until more definite remedial service can be secured.

Eye Murine

This little formula is splendid for the relief of inflamed lids and especially when there is a tendency toward granulations.

Sodium borate	6 Gr.	} in Aqua (distilled) 1 oz.
Boric acid	30 Gr.	





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